



The role and effectiveness of safety representatives in influencing workplace health and safety

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The role and effectiveness of safety representatives in influencing workplace health and safety

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This study presents a review of the quantitative and qualitative evidence for the link between worker representation and consultation and effective health and safety management. Through a series of detailed case studies in two sectors of the economy, it examines the dynamics of representation and consultation in improving health and safety performance. Its review of previous studies and the evidence of the case studies detailed in the report support a conclusion that joint arrangements, through which workers are represented and consulted on their health and safety, are likely to have better outcomes than arrangements in which management acts without consultation. However, it suggests that arrangements for worker representation and consultation are dependent upon a number of preconditions for their effectiveness. These include a strong legislative steer, effective external inspection and control, demonstrable senior management commitment and capacity towards both health and safety and a participative approach, competent hazard/risk evaluation and control, effective autonomous worker representation at the workplace and external trade union support. Such preconditions were not present in the majority of the case studies and both they and the review of the wider literature suggest that changes in the structure and organisation of work mean that achieving them present considerable challenges. Nevertheless, the study found a number of examples of ways in which these challenges had been successfully addressed. It suggests therefore that there are important messages presented by these examples for regulators, trade unions and employers alike if worker representation and consultation is to be supported in realising its potential to contribute to improved health and safety outcomes.

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EXECUTIVE SUMMARY

1 INTRODUCTION

This study reviews the quantitative and qualitative evidence for the link between representative worker participation and effective health and safety management. Through a series of case studies in two sectors of the economy, it examines the role of worker representation and consultation in improving health and safety performance, exploring which arrangements work best and why.

The aims of the research were to:

- determine what are the most effective arrangements for worker representation and consultation in improving health and safety arrangements and performance.
- investigate which elements of such participation most successfully improve health and safety at work
- identify the main factors that support or constrain representative worker participation in health and safety.

The research was in three parts in which several approaches to studying quantitative and qualitative evidence of effectiveness were combined, linking macro-level secondary analysis of national survey data to detailed fieldwork studies.

The first part begins with a review of UK approaches to representative participation in health and safety, including an analysis of its antecedents and its position in an international context. It presents the findings of a quantitative study on the relationship between unions, joint arrangements and measures of health and safety performance drawn from the WIRS/WERS surveys and concludes with a discussion of published research concerning what works and why it works in worker representation on health and safety.

The second part of the study reports the experiences of health and safety and worker representation in ten case studies. In each of two industries, chemicals and construction, a profile of health and safety in the sectors is outlined, followed by detailed findings on the operation of health and safety arrangements, both quantitative and qualitative.

The final part of the report presents a comparative analysis of the dynamics of representative participation in each sector. A discussion that draws together findings from the case studies, previous literature and the macro-level quantitative study, explores what are the factors that contribute to the success of worker representation and consultation.

2 THE BACKGROUND

In understanding what determines the effectiveness of worker representation and consultation on health and safety it is important to be clear about what is meant by these terms. Starting with their legal interpretation it is apparent that there are several different models of worker representation as well as direct consultation that are possible under present UK legislative provisions. The 'preferred model' in an employment law context would appear to be that framed by the SRSC Regulations 1977. However, the legal meaning of consultation is also helpful in furthering the understanding of effective worker involvement in health and safety, whether it is direct involvement or that mediated through representation. Here, the notion of consultation involves considerably more than employers and managers imparting information and instruction to

workers. It requires elements of two-way communication, in good time and is associated with an implication of consequential action. With these ideas in mind it becomes possible to examine both the previous research on worker representation and consultation as well to undertake an inquiry into present experience.

The great majority of previous studies on worker representation and consultation in the UK and elsewhere broadly support the notion that joint arrangements are associated with better performance than when employers manage health and safety alone. However, there is considerable variation between these studies in what they regard as 'better performance' as well as in the quality, consistency, reliability and relevance of the measures used. Additionally many of them are studies of practices in other countries, where there may be significant differences in legal provisions and other supports for implementing and operating worker representation in health and safety.

3 STUDIES OF QUANTITATIVE RELATIONSHIPS

For these reasons we concentrated on a systematic examination of British evidence of the effectiveness of joint arrangements. We did so by initially focusing on a re-examination of the findings of the most influential contribution to the UK research to date. This was the study of Reilly *et al* who published the results of their multivariate analysis of data from the Workplace Industrial Relations Survey 1990 on joint arrangements and injuries in private manufacturing in the *BJIR* (Reilly *et al* 1995). Their findings have been widely quoted to demonstrate an association between participative arrangements, especially the role of trade unions, and improved health and safety performance.

However, our study failed to determine any reliable results for the effects of the specific health and safety arrangements distinguished by Reilly *et al*. We concluded that the fundamental reason for this failure to replicate the previous findings was to be found in the extremely sensitive nature of the data set in which the behaviour of more than 40 variables was investigated in a study of only 436 cases (432 in Reilly *et al*). Other secondary analyses of the later WERS 98 data set have also failed to support the findings of the original study. When coupled with our own observations therefore, they further underline the unreliability of the original study.

The fact that we were unable to arrive at a more precise conclusion than that the arrangements for occupational health and safety should not be left to management alone points to the need for further and more extensive research. In our view the best way forward would be to combine both quantitative and qualitative methods and in so doing, go beyond the analysis of information on formal structures for representation. Because the apparent precision of our knowledge of the effects of health and safety arrangements has been seen to be ill-founded, there is good cause to re-examine a whole number of issues and dynamics that may affect the determination of health and safety. No small reasons for doing so are that trade union presence has declined since WIRS90 and, partly as a consequence of EU directives, there has been increased emphasis on management taking a lead in the development of health and safety systems.

4 WHAT WORKS AND WHY?

There is clearly room for more detailed and rigorous quantitative analysis of the relationship between representation and joint arrangements and measures of increased OHS activity and performance. However, it is equally important to understand what makes worker representation and consultation on health and safety effective and what are its supports and constraints. Review of previous research suggested a set of pre-conditions for effective representation and

consultation. Our case studies confirmed that these prerequisites were essential for the effective operation of worker representation and consultation on health and safety. They included:

- a strong legislative steer
- effective external inspection and control.
- demonstrable senior management commitment to both OHS and a participative approach and sufficient capacity to adopt and support this type of management
- competent hazard/risk evaluation and control
- effective autonomous worker representation at the workplace and external trade union support
- consultation and communication between worker representatives and their constituencies.

However there has been well-documented change in the structure and organisation of work and labour markets. What this means for ‘what works’ in terms of the contribution of worker participation to improved health and safety requires investigation.

Additionally, the main regulatory model of worker representation on health and safety in the UK is based on the rights and functions of trade union appointed health and safety representatives. It is widely acknowledged that it is only partially relevant to the structure and organisation of work and the every day experience of UK workers where only seven million of the approximately twenty one million UK workers are trade union members. At the same time, it is quite clear from the literature that more recent regulatory efforts to address the needs of workers without access to trade union representation have been inadequate substitutes. It is also evident from recent policy discussion that some clear thinking is required concerning the social relations involved in representing the health and safety interests of workers and within this context, what supports effective representation.

5 THE EXPERIENCE OF REPRESENTATION AND CONSULTATION IN CHEMICALS AND CONSTRUCTION

The case studies were an opportunity to explore these issues through their examination of different kinds of arrangements for the practice of worker representation on health and safety in a variety of work situations in chemicals and construction. Such arrangements included examples of:

- participation/representation through trade union health and safety representatives
- participation/representation through non union means,
- no participation/representation structures at all

The aim of the case studies was to examine the role of the above prerequisites for effectiveness in conjunction with other features of management organisation and labour relations in the operation of joint arrangements. Particular attention was paid to the impact of the structural and organisational changes, on these arrangements and to identifying ways in which both employing and labour organisations seek to overcome the problems they create. Moreover it enabled the identification and examination of the main factors that supported or constrained representation and consultation in achieving improved health and safety performance.

5.1 Chemical industry

The chemicals sector was chosen for study because it was anticipated that a high awareness of and commitment to health and safety management would be found in the sector, along with well developed arrangements for representation along lines laid down in the SRSC Regulations.

However, on closer scrutiny, the systematicity with which the health and safety arrangements applied and particularly the extent to which effective representation and consultation on health and safety took place was seen to vary considerably across the case studies. At the same time there were close parallels between this variation and the health and safety performance across the five cases.

Those cases in which there were reasonably systematic arrangements in place for managing health and safety were also the case studies in which the operation of representation and consultation was most developed. These were the same case studies in which the health and safety performance (measured by reported accidents) was above the industry average and in which workers reported most favourably about their management's performance on various indicators of arrangements for both health and safety and for consultation.

In contrast, where arrangements for health and safety were implemented less systematically, there were also poor and incomplete arrangements for representation and consultation with employees. These were also the case studies that performed less well than the industry average in terms of reported injuries, and where workers reported most unfavourably about management's performance on various indicators of arrangements for both health and safety and for consultation.

We concluded therefore that the five case studies in chemicals demonstrated a clear relationship between a constellation of factors associated with systematic and consultative management of health and safety and positive health and safety outcomes. Despite this finding however, we noted that even in a relatively stable industry with a strong health and safety profile such as the chemicals sector, the preconditions for effective implementation of the legislative requirements of the 'preferred model' of representation and consultation were far from being found universally throughout the sector.

5.2 Construction industry

The five case studies in construction reflected the range of arrangements likely to be found in the industry. Three were non-union sites the remaining two were unionised but only in one had a trade union appointed a health and safety representative in accordance with the SRSC Regulations. The case studies highlighted the fragmentation of work organisation in the industry in which, the systematicity of health and safety management arrangements was weakened and the employees of sub-contractors repeatedly fared less well in terms of consultation on health and safety. This was particularly apparent in the three non-union sites and responses from the employees of subcontractors overwhelmingly indicated that management efforts to address the problem had not been successful

In the two case studies in which trade unions were present, more meaningful worker consultation and representation on health and safety was possible. In one of them the regional organiser had taken on the role of representing workers' health and safety interests and it occupied a considerable amount of his time. In the other, the trade union convenor, with the agreement of the principal contractor management had been appointed as a full-time health and safety

representative with a site-wide remit. In both these cases studies, while differences between the employees of the principal contractor and those of sub-contractors and agencies remained, the quality of respondents' experiences of the arrangements for health and safety management, their experience of training and of the range of various forms of consultation discussed previously, was better developed than in the other case studies. These observations also provide support for the view that direct and indirect forms of employee consultation on health and safety are best understood as mutually supportive elements of a continuum of participative activity rather than as distinct and exclusive arrangements.

They contrasted with the case studies in which no forms of representational arrangements were in place in as much as they demonstrated greater activity for both representational and direct worker participation in health and safety. They showed that the presence of trade union organisers/representatives clearly stimulated worker participation generally and that such representatives were seen by workers as significant players in this respect.

It is important to recognise the significance of the presence of trade unions in these situations and the role they played in implementing and operationalising arrangements for consultation in ways that were not found in worksites where trade unions were absent. Moreover, while many of their effects might be interpreted from a management point of view as means of improving communication and enhancing health and safety awareness generally, there are other ways of understanding what was going on. Both in terms of trust and autonomy, workers regarded their representative quite distinctly from management. His identification with their own interests in health and safety was clearly seen as important to his success in representing them. This highlights the weakness and over-simplicity of managerialist prescriptions for consultation in the industry, that have been suggested both by the industry itself and by previous HSE commissioned research on this subject.

Of course, low trade union density effectively prohibits the automatic development of this type of representation at most worksites. However, rather than ignore its contribution, a more constructive approach might be to recognise the importance of trade union representation and its role in improving meaningful consultation in the industry. This approach then begs a series of questions about what could be done to enhance it.

6 CONCLUSIONS

The main conclusion that emerges from our findings overall is that worker representation and consultation in the UK have a significant role to play in improving health and safety at work. They have the potential to raise health and safety awareness amongst both workers and managers, effect improvement in arrangements for managing health and safety, improve the practical implementation of these arrangements, and contribute to improved health and safety performance. Most importantly they represent means by which workers' voice can be heard and acted upon to the benefit of those that experience the risks of the production process.

Our findings confirm that there are certain preconditions for effective representation and consultation. Arguably, most of these preconditions, such as the commitment of senior management to health and safety and its systematic management, competent risk evaluation and control and effective external inspection are simply aspects of good occupational health and safety management practice that is already required by EU and UK law. It also follows that they are likely to be most effectively operationalised in a climate of good industrial relations. As our study shows, there was a strong association between workers' positive experiences of various

measures of consultative management generally and their experiences in relation to consultation on health and safety specifically.

Additionally, the right of workers to representation on health and safety as well as the right to be consulted appropriately on health and safety issues, as on other matters, are fundamental aspects of workers' rights in the EU generally .

Yet, despite the legal basis of these preconditions we found that they were by no means always in evidence at the workplaces we studied. In short, these legal requirements had not been widely implemented. Given that our choice of workplaces probably represented the better end of the industries we chose to study, we can assume that the preconditions we have identified will be less frequently found elsewhere.

Our study suggests that existing legal measures — on such matters as training, rights to make representations to employers, to receive information, engage in risk assessment, to be consulted prior to workplace change that might affect OHS and to liaise with inspectors and OHS professionals — are all implemented incompletely. Despite this, these and other requirements on worker representation and consultation were rarely, if ever, the subject of enforcement by the regulatory agencies.

In thinking about a future research agenda in the light of our findings, there are therefore at least two important considerations to take into account. The first is to further establish the extent to which existing measures and strategies have been effective, to undertake a more detailed analysis of the situations in which they work best, and also to identify how they may be improved to address known *existing* deficiencies. This could help with the better implementation of what, after all, are quite fundamental elements of the EU law on the management of the working environment.

A second equally important consideration is to account for the changes that have taken place in the structure, organisation and labour relations contexts of the work situations in which worker representation and consultation are supposed to take place. In so doing it is necessary to ask whether present legal provisions and the strategies of the interest groups involved continue to be relevant or whether their revision is required. The original conceptualisation of the legislation on worker representation and consultation was enabling and constitutive. That is, measures were envisaged to provide a clear message to employers concerning their obligations in the labour relations of health and safety at work. They established basic institutions of worker representation via health and safety representatives and joint health and safety committees. They provided rights to information and consultation on OHS, thus helping to establish the basic floor of rights on which organised workers could build. But does this approach sufficiently address the current situations in which the employment relationship that was the basis of the labour law under which such measures were made has changed fundamentally for many people currently engaged in paid work?

The debate on the efficacy of further legal reform and enforcement in addressing this problem as opposed to voluntary means to achieve similar ends by 'winning the hearts and minds of industry' and through exploiting various levers in the social and economic environment of business, is clearly set to continue. The policy answers to these questions are likely to be driven by wider political and economic considerations and will remain part of the larger debate on the future of regulatory strategies on health and safety for some time to come. But here too there is a clear research agenda in the interim. Underpinning all strategies to improve worker representation in OHS is the necessity of enabling *all workers* involved in the conduct of an establishment's

undertaking to be represented. Thus, an establishment's 'workforce', includes all individuals who are engaged in the conduct of its undertaking, whether as an employee of the firm or of another person, or as a contractor of the firm or of another person, and regardless of whether the person actually works at the firm's premises. Relatively new and more embracing responsibilities about consultation processes on employers in charge of multi-employer worksites involving subcontractors, agency labour and the like already exist in construction. Our evidence suggests they are in themselves insufficient to effect the increased consultation they require. There remains much to be learned about best practice in these situations, and equally important how it might be applied in other related scenarios.

In the meantime the research suggests that if these challenges are to be adequately addressed, now and in the future, there are a number of questions regulatory agencies, employers and trade unions need to ask themselves about their strategies on worker representation and consultation on health and safety.

Regulators might begin by inquiring whether they have means at their disposal to bring worker representation and consultation in all workplaces up to the level of activity implied (but not yet achieved) by existing legal requirements. To do so would require a mixture of more consistent, robust approaches to regulation and its enforcement in combination with the strategic exploitation of levers and supports in the social and business environment of firms to influence adoption of more inclusive methods of self-regulation. Whatever combination of methods are used by regulators, our study demonstrates that it is vital that a shared understanding of the meaning and potential of worker representation and consultation is held and the prerequisites for its success are properly understood and implemented by all stakeholders. This also means the recognition of the role of trade unions as important organisations in supporting worker representation. As is shown by the activities of trade unions in our case studies in construction, as well as by our review of their activities in relation to small workplaces in the UK and elsewhere, such a role is not necessarily limited to traditional workplace representation, but may have more extensive applications in relation to hard-to-reach groups. It could also have a potential to relate to non-union situations.

However, if trade unions are to improve the representation of workers on health and safety within workplaces and prove a useful support for engaging workers outside traditional boundaries, there are important questions they also need to address. Significant amongst them are the implications for trade union organising strategies of this wider remit on representation and consultation on health and safety. Consideration also needs to be given for example, to the ways in which traditional notions of competence, advocacy and representation may require modification to fit emerging work scenarios. Trade unions could further consider ways in which new alliances and partnerships could be developed at sectoral, local and other levels to promote representation and consultation in workplaces. New alliances in the wider communities in which workplaces are located are additional means through which representation and consultation could also be extended to hard-to-reach groups of workers.

All of this of course requires commitment and co-operation from employers. The message that advocates of the role of worker representation and consultation in managing health and safety therefore need to press home to employers is that such arrangements are required by law, they are both ethically and economically desirable and they work better than unilateral ones in improving health and safety performance.

CHAPTER 1: INTRODUCTION TO THE STUDY

Worker participation in health and safety plays a key role in current EU and national strategies aimed at improving health and safety management. Yet there is much that we do not understand about its contribution to health and safety performance or the conditions enhancing its effectiveness. The present study was undertaken to help further this understanding. It reviews the quantitative and qualitative evidence for the link between representative worker participation and effective health and safety management. Through a series of case studies in two sectors of the economy, it examines the dynamics of the detailed operation of representative worker participation in improving health and safety outcomes. Its subject matter is considered in the light of the changing structure and organisation of work and the implications of such change for support for worker representation.

The role of health and safety representatives in the organisation and management of occupational health and safety has been quite extensively researched in various countries since the 1980s. The findings of this body of research suggest that:

- the presence of joint arrangements for worker consultation makes a positive contribution to health and safety performance
- there are a number of factors, such as management commitment, workplace size, trade union presence, training, and provision of information, which appear to support this contribution

However, although we know something about the implementation and operation of various statutory provisions on worker representation, in the UK, detailed studies establishing a chain of causation between representation and measures of health and safety performance are hard to find (Nichols 1997). Furthermore, if, as the limited research suggests, links exist between worker representation/consultation and improved health and safety arrangements and performance, there are many questions concerning the dynamics of such a link, and what supports or constrains it, which remain unanswered. They include for example questions about:

- the most effective forms and means of worker representation in health and safety
- mechanisms of action for safety representatives
- relationships between worker representation and broader worker participation in health and safety
- the most significant supports for worker participation/representation in health and safety organisation, and the role of the legal framework and managerial facilitation and co-operation
- constraints to the development of the effectiveness of worker participation/representation
- the relationship between arrangements for representative participation and the engagement of workers with health and safety
- tangible economic/business benefits to employers, workers and society of active worker representation in health and safety

1.1 THE REMIT OF THE STUDY

The primary objectives of the research were to:

- determine what are the most effective arrangements for worker representation and consultation in improving health and safety arrangements and performance and under what conditions they are found
- investigate the means by which forms of such participation most successfully achieve this improvement
- identify the main factors that support or constrain representative worker participation in health and safety

Its secondary objectives were to:

- examine the social construction of representative worker participation in health and safety organisation and management in the light of the changing labour market and organisation of work
- evaluate the consequences of these findings for regulatory strategies and the approaches of non-regulatory bodies (such as employers' organisations and trade unions) to achieving effective worker participation in health and safety.

Initially, it was intended that a third secondary objective would be to consider whether economic and business performance indicators for health and safety calculated by managers could also be used by them to measure the effectiveness of arrangements for worker participation. However, we discovered that in none of the case studies undertaken was there any evidence that managers carried out such calculation in a systematic or meaningful way in the first place. It remains a theoretical possibility that such performance indicators used to measure the effectiveness of health and safety arrangements could be adapted to account for the contribution of arrangements for worker representation/participation. But the absence of any evidence that they were being used in practice in measuring the economic impact of health and safety arrangements on the business performance of organisations we studied did not allow us to pursue the objective of studying the possible development of such arrangements any further.

The research adopted a methodology in which several approaches to studying quantitative and qualitative aspects of the indicators of effectiveness were combined in order to better understand the dynamics of representative worker participation and its role in approaches to health and safety organisation and management in different employment contexts. It linked macro-level secondary analysis of national survey data to detailed fieldwork studies. This was done by re-analysis of British evidence on the relationship between the presence of representative and consultation structures for health and safety in manufacturing firms and their health and safety performance. Such analysis was possible through access to data from the two most recent in the series of Workplace Employee/Industrial Relations Surveys (WIRS 1990 and WERS 1998). Our analysis of this evidence was contextualised with a review of the international literature on the relationship between joint arrangements and health and safety performance. Complementing the macro-level analysis and shedding further light on its findings, we undertook a detailed investigation of the role of representative worker participation in a series of case studies on firms from chemicals and construction selected on the basis of their:

- recorded work-related injuries and other features of their arrangements for OHS that suggested variation in health and safety organisation and performance

- range of strategies and structures for employee representation and consultation in occupational health and safety management
- range of establishment size, industrial sector, employment practices management structures and work organisation.

The case studies analysed the dynamics of representative action and outcome. The experience of workers, managers and representatives in relation to health and safety arrangements and outcomes was sought in all the firms studied and factors promoting and supporting effective consultative arrangements identified. Efforts were made to identify issues that were current concerns of participative management and, to the extent possible within the time constraints of the study, their course and outcomes were traced.

Case studies were undertaken in two large firms and three small firms in each of the sectors of employment. The firms were selected with respect to their range of structures for worker participation and representation (direct/representative; union/non-union), work organisation (including contracting and subcontracting) and health and safety management arrangements and performance and were considered to be typical of current patterns in the sectors concerned. It was initially intended to choose firms that represented above and below average performers according to such criteria. This was possible in chemicals but consistent selection on this basis in construction proved to be unreliable. Therefore, rather than attempting to pre-select case studies solely on the basis of subjective measures of performance, we have used such measures along with others to select the cases we think represent the range of performance that is fairly typical for each of the sectors studied.

Information from each firm was collected during a series of visits and re-visits and by means of a questionnaire (for samples of employees, sub-contract and other workers) and through interviews with workers, safety representatives, relevant managers, health and safety advisors, and regulatory inspectors. It was supported by documentary material selected from a variety of sources including for example, accident data, records of risk assessment, health and safety management plans and minutes of joint health and safety committees. This allowed a substantial picture of health and safety arrangements and performance to emerge for each of the case studies as well as a detailed picture of employees' views concerning both these arrangements and their own health and safety. Using this information we were able to study qualitative and quantitative perspectives of the dynamics of representation/consultation in relation to our primary and secondary research objectives mentioned previously. Conventional statistical packages (SPSS) were used for analysis.

The confidentiality of all the participants in the study was respected and measures to achieve their anonymity are maintained throughout the report.

1.2 STUDY CONTEXT

In 1988 Dawson *et al* (1988) published a seminal work on self-regulatory approaches to health and safety management in three industrial sectors, construction, chemicals and retailing in the UK. It was an important analysis of the operation of the two related ideas of the Health and Safety at Work Act — self-regulation and workforce involvement. It therefore provides a useful point of reference for our study, which takes place following the considerable change that has occurred in the structure and organisation of employment since the Dawson study was undertaken.

Dawson *et al* came to several general and related conclusions about the post-HSWAct system for self-regulation in the three sectors they studied. In summary, they argued that such a system could be effective at a local level if it were adequately resourced and related to nationally established standards and enforcement, but that elements of government regulation were an essential prerequisite for this. They further concluded that performance had deteriorated since 1981 and this deterioration had taken place in sectors characterised by small firms, subcontracting, low pay, weak trade unionism and productivity improvements. And they noted that central to all their conclusions was the observation that the basic requirements of employers' knowledge, capacity and willingness for local self-regulation would only be generated and maintained if those involved are held seriously to account for their performance in health and safety.

Our own study was constructed with the findings of Dawson *et al* in mind. While our analysis at the macro level is of data for private manufacturing, drawn from the WIRS/WERS series, for fieldwork we focused on a series of case studies in two of the three industrial sectors that Dawson *et al* had studied—chemicals and construction. We have of course not attempted to replicate their methods (which addressed the issue of self-regulation more widely), however there are obvious overlaps between our concern with the effectiveness of worker representation and consultation and their wider interest in the nature and effectiveness of self-regulation. Initially we also planned to include retail, the third sector researched by Dawson *et al* in our study. To this end we undertook a further five case studies in this sector. However, we found they added nothing of significance to the evidence from chemicals and construction, generally confirming and corroborating findings from the other two sectors. For the sake of clarity and to avoid overburdening this report with unnecessary detail we have therefore not included the case studies from retail in the body of this report, but will publish our findings in relation to this sector in a further publication.

Since Dawson *et al* undertook their study there have been significant changes in the economic and regulatory environment in which health and safety arrangements operate. Most of these changes in the structure and organisation of work, such as the decline in trade union membership, shifts in employment patterns away from manufacturing to services, downsizing and the growth of employment in small business, subcontracting, and labour hire were beginning to be apparent at the time of their study. They have continued subsequently to the extent that their occurrence is now far more extensive and effects more obvious. At the same time, important regulatory changes on OHS management have taken place, in particular the introduction of measures to implement the EU Framework Directive 89/381. These changes, at least in theory, should have led to the establishment of a more systematic OHS management by employers. In it, not only is the competency of OHS management mandated and systematised, but enhanced requirements to inform and consult employees and their representatives are included as integral elements of systematic OHS management. These developments, arguably, go some way to meet the finding of Dawson *et al* concerning the need for a strong regulatory lead, at least at the level of the EU Framework Directive. However, the extent to which they have in fact been incorporated in the regulatory changes occasioned by British legislation implementing the Directive has been a matter of some debate (see for example, James 1993; James and Walters 1999). There have also been substantial increases in penalties for health and safety and the prospect of imprisonment for those found guilty of very serious failures is now a reality.¹ However, there has been further debate concerning the adequacy of such increases and the rigour with which they are applied (James, 1997; Tombs 1995). Moreover, current government strategies on health and safety

¹ By October 2003, 29 persons had received prison sentences for work-related health and safety offences (although only 19 actually went to jail). See Ponting 2003

regulation generally exhibit a marked preference for non-regulatory means of addressing improvement.²

1.3 REPORT OUTLINE

The report is presented in three parts. It opens with a review of UK approaches to representative participation in health and safety and includes an analysis of its antecedents as well as its position in an international context. It discusses current knowledge of the effectiveness of worker representation and consultation in health and safety and presents the findings of our quantitative study on the relationship between unions, joint arrangements and measures of health and safety performance drawn from the WIRS/WERS surveys. This is followed by discussion of the role of worker representation within wider strategies for improving health and safety management, including a review of published research on what is known about what works and why it works. Additionally, this section identifies the areas in which more understanding is required and locates the role of the present contribution within this discussion.

Our analysis of the experiences of health and safety and worker representation in the ten case studies follows. We first present a profile of health and safety in each of the industrial sectors concerned. This is followed by our detailed findings, both quantitative and qualitative, case by case, for each sector and our comparative analysis of the dynamics of representative participation in each sector.

The final section of the report presents a discussion of our findings in the light of previous studies and the wider literature. This section concludes with a review of the lessons of our investigation.

The research project on which this report has been based was a large and multifaceted undertaking. It resulted in detailed findings across the range of its inquiry. Some of these details have been published elsewhere. While the present report presents a comprehensive overview of the findings of the whole project, readers are referred to these additional publications where appropriate in the following pages.

² For example in the major government strategy statement on health and safety – *Revitalising Health and Safety*, published in 2000, 44 Action points were identified. Of these less than a dozen concerned legislative actions and in the three years since the statement was published none have been implemented (James and Walters 2003). The most recent HSC strategy statement even further embraces a non-regulatory approach (HSC 2004)

PART 1: A REVIEW OF THE EVIDENCE OF THE ROLE OF WORKER REPRESENTATION AND CONSULTATION IN HEALTH AND SAFETY AT WORK.

The aim of Part 1 of this report is to explore the evidence for the effectiveness of participative approaches to improving the health and safety of workers at their place of work.

Chapter 2 begins with a discussion of the definitions used to understand the various practices of worker participation that are the subject of this report. Definitions have evolved with legal precedent and the changing mores of policy on labour conditions and productivity. It is therefore important from the outset to define our use of key terminology. The chapter continues with an outline of the legislative framework for worker participation in health and safety in the UK and discusses the extent to which it can be said to provide a comprehensive and clear regulatory steer on the subject. These two related discussions form the backdrop to the review of the research literature on the role and effectiveness of worker participation in health and safety that follows.

The review sets the scene for Chapter 3 which presents of our own analysis of the evidence of effectiveness of arrangements for joint consultation on health and safety in the UK. It takes the form of a re-analysis of the data from WIRS 1990 that was used by Reilly *et al* in the mid-1990s for their influential study on trade unions, safety committees and workplace injuries. Building on this re-analysis, our own study extends to include a further examination of data from WERS 1998 and comparison with quantitative studies from other countries.

The international dimension is further developed in the final chapter of this part of the report, which presents a discussion of the overall evidence presented on ‘what works’ in representative participation. This discussion also includes reference to the impact of changes that have occurred in the nature and organisation of work on the effectiveness of worker representation and consultation. Particular attention is paid to those changes that have been especially felt in the sectors in our study. From this, a set of prerequisites for the effectiveness of worker representation in health and safety are identified.

CHAPTER 2: THE DEVELOPMENT OF WORKER REPRESENTATION AND CONSULTATION IN HEALTH AND SAFETY AND SOME CONSIDERATIONS OF ITS EFFECTIVENESS

2.1 QUESTIONS OF DEFINITION

Definition of the terminology used in discussing worker participation is necessary because terms such as consultation and participation have come to cover a range of different practices, often with different expectations, supports and constraints influencing their outcomes. Defining the nature of engagement in arrangements for different kinds of worker participation on health and safety is also a way of understanding the quality of what is actually taking place in exchanges between workers and employers/managers. This is especially important in distinguishing situations in which workers and their representatives are passive recipients of information about the practice of health and safety management, from those in which they have some chance to influence the direction of the outcomes of such engagement.

Although the focus of the present research concerns the effectiveness of representative participation, there are several reasons why adopting this approach does not imply ignoring the direct participation of workers in health and safety matters. These reasons include the idea (discussed in sections that follow) that participation of individual workers in health and safety matters is beneficial. More specifically however, the H&S(CwE) Regulations 1996, transpose EU Framework Directive 89/391 requirements concerning participation of *workers and their representatives*. Therefore the legislative framework expressly provides for such participation. However the most persuasive reason why the direct participation of workers cannot be ignored in a study primarily focussed on representative participation is the argument that in practice the occurrence of both forms of participation is linked and that they are likely to influence one another (Walters and Frick 2000).

2.1.1 Direct participation

By direct participation we mean formal arrangements for the engagement of workers with supervisors, managers or employers on health and safety matters individually rather than through their collective representatives. It is a term that covers many diverse practices. But most forms of 'direct participation', imply that individuals are consulted and encouraged to become involved in the determination of their working environment or their work organisation. Mostly, such participation stays well within the boundaries of the hierarchical controls within organisations. Evidence for the effectiveness or otherwise of direct participatory arrangements for workers in health and safety is limited. Nevertheless, research suggests that arrangements for direct participation may give workers a considerable influence on OHS, if they have strong bargaining positions and are supported by their own trade union organisation.³

Studies on the role of legislative measures protecting workers' individual rights to refuse dangerous work and their rights to information on the hazards they face are rare. It is therefore not clear what support such measures provide for the direct engagement of workers in arrangements concerning their health and safety. It is certainly the case that within smaller

³ See for example Karlsen et al in Gustavsen and Hunnius, 1981: 134. In their study Karlsen et al demonstrated how workers' influence on OHS was conditional on both the strengths of their position externally in the labour market and internally within the labour process as well as on the extent of their trade union organisation.

enterprises — where representative arrangements are most commonly absent — these legal measures are rarely utilised by workers (Walters 2001). The vulnerability of workers in such situations has been amply demonstrated and for a host of reasons their situation is likely to militate against them being able to take direct action implementing their legal rights to a safety and healthy workplace.⁴

Therefore, the limited evidence that exists suggests significant barriers to the independence, support and sustainability of direct participation, unless workers are able to enter into it with the power and resources demonstrated in the Norwegian study by Karlsen *et al.*

2.1.2 Representative participation

Collective representation of workers' interests in health and safety is made possible through formal arrangements, by statutory or voluntary means. This is a much less nebulous concept than that of direct participation. Requirements on such participation exist in all EU jurisdictions and provide for a number of minimum legal rights for effective worker representation through:

- Selection of representatives in health and safety to be by employees.
- Protection of representatives from victimisation or discrimination as a result of their representative role.
- Paid time off to be allowed to carry out the function of safety representative.
- Paid time off to be trained in order to function as a safety representative.
- The right to receive adequate information from the employer on current and future hazards to the health and safety of workers at the workplace.
- The right to inspect the workplace.
- The right to investigate complaints from workers on health and safety matters.
- The right to make representations to the employer on these matters.
- The right to be consulted over health and safety arrangements, including future plans.
- The right to be consulted about the use of specialists in health and safety by the employer.
- The right to accompany health and safety authority inspectors when they inspect the workplace and to make complaints to them when necessary.

Like arrangements for direct participation there are two fundamentally different ways in which we can try to understand the operation of representative worker participation. One is to acknowledge that it has its roots in the representation of workers by organised labour both within the workplace and outside it. It has an historical development, which is at once both linked to the development of collective labour rights and to the development of the institutions of socially democratic welfare societies. It is manifest in the agreements negotiated by trade unions with employers, found in national labour legislation and in international provisions such as the ILO Convention 155 and the EU Framework Directive. The SRSC Regulations in the UK derived largely from such thinking. The reason for these collective rights on representation of workers' interests in health and safety is therefore primarily to help workers to achieve a degree of protection from hazards to their health and safety that are a consequence of their exploitation by employers/management.

Another set of influences on representative participation are found in the liberal/technical/corporatist roots underpinning the idea that workers might appoint representatives to participate in a co-operative dialogue with managers. It was such influences

⁴ See Nichols 1997 for a fuller discussion of the 'structures of vulnerability' encountered by both workers and employers in small enterprises and why they help to account for the greater risks of fatalities and serious injuries in this sector.

that seem to have informed many of the early, voluntary approaches to participative arrangements on health and safety in the UK and was also largely the thinking behind the recommendations of the Robens Report in 1972 on a statutory obligation to consult workers on OHS matters.

A further important influence is the prevailing climate during the implementation and operation of the measures and it is clear that this has taken place during a time in which pluralist notions of representation have enjoyed little currency amongst policy makers, regulators and employers alike. As a consequence, a managerialist view of the role of representation in health and safety has increasingly dominated discussion concerning its operation. It is further evident in more recent legislative reforms such as the Offshore Installations (Safety Representatives and Safety Committees) Regulations 1989 and the Health and Safety (Consultation with Employees) regulations 1996. Even the trade unions — who were both responsible for and the beneficiaries of the pluralist SRSC Regulations — have shifted their ground considerably, for example to embrace notions of partnership on health and safety, in which the profile of conflict within the subject is considerably reduced and the notion of *shared* interest emphasised. While their position on these issues is no doubt influenced by a pragmatic consideration of the means to stem waning trade union influence, their ambivalence on the fundamental nature and meaning of the representational rights given them under the SRSC regulations is apparent.

The 2004 *Joint Declaration of Principle on Worker Involvement*, that was agreed by both the employer and trade union members of the Health and Safety Commission is a further manifestation of the trend in this direction (HSC 2004a). It describes its vision as being — in common with *the HSC Strategy for Workplace Health and Safety in Great Britain to 2010 and beyond* — to gain recognition of health and safety as a cornerstone of civilised society and, with that achieve a record of workplace health and safety that leads the world. It goes on to say:

‘We agree that an essential part of this vision is a workforce fully involved in health and safety management and a vibrant system of workplace health and safety representatives operating in partnership with management.’

And:

‘By involvement we specifically mean relationships between workers and employers based on collaboration and trust and nurtured as part of the management of health and safety

The resulting approach, now widely in evidence, largely takes for granted assumptions of both shared interest and management control, as well as notions that health and safety is a consensus issue and as such, different from other, more conflictual aspects of employment relations. A further point to note is that such an approach has been in the past additionally often associated with a belief in individual causation of work injuries. Under such influences therefore, as well as providing an experience based contribution to dialogue on OHS between themselves and management, there may be also be an expectation that as part of their role, worker representatives may also help to supervise and control their workmates’ risk behaviour.

Despite the theoretical conflict between these two ways of understanding worker representation in health and safety, there is nothing to prevent these two approaches co-existing within arrangements for worker participation in the same enterprise. Representatives therefore have in practice two sets of discourses they can draw upon to try to influence health and safety outcomes.

One set is based on a pluralist perspective of conflicting interests. In this, negotiated compromise is the accepted solution and the possibility of enforcement and legal sanction represent the ultimate external support for worker protection through participative collective action. The other is drawn from a managerialist perspective, where the representatives work from within management to improve OHS through their competence and practical experience. Even here, being backed by legislative standards and external inspection is important as it adds legitimacy to the status and influence of consensus oriented representatives.

2.1.3 Defining the nature of the process of participation

The above duality suggests that the nature of the engagement between the various players involved in arrangements for either representative or direct forms of worker participation in health and safety may be of considerable importance in determining outcomes. A starting point in trying to understand the nature of such engagement can be made with the legal meaning of the terms used to describe the requirements of the legislation. Such definitions may provide a yardstick with which to measure the quality of the transactions that could be anticipated from the appropriate operation of the legislation.

Notwithstanding the specific rights of worker health and safety representatives to undertake inspections, investigate complaints and to receive training under UK legislation on worker participation in health and safety, a key term embracing these activities is ‘consultation’. For example, under HSW Act 1974, Section 2.4, (health and safety) ‘representatives shall represent the employees in *consultations* with the employers under subsection 6. This subsection states:

It shall be the duty of every employer to *consult* any such representatives with a view to the making and maintenance of arrangements which will enable him and his employees to co-operate effectively in promoting and developing measures to ensure the health and safety at work of the employees, and in checking the effectiveness of such measures.

Since these provisions were included in the HSW Act, the employers’ duty to consult has widened to include situations where there is no trade union recognised for collective bargaining purposes. So for example, where there are employees who are not represented by health and safety representatives under the SRSC Regulations, Regulation 3 of the Health and Safety (Consultation with Employees) Regulations 1996 requires employers to consult these employees ‘*in good time* on matters relating to their health and safety’. Consultation required under this regulation may be ‘with either —

- (a) employees directly; or
- (b) in respect of any group of employees,’ with one or more persons from this group elected for these purposes (known as representatives of employee safety)

However, it is also important to note that the application of these requirements to consult has an order of preference in law. Where there are recognised trade unions, consultation is with the representatives these unions have appointed under the SRSC Regulations 1977, where there are no such unions recognised, employers are required to make arrangements to consult, either directly with workers or through representatives that the workers have elected for these purposes. A similar approach is found in legal requirements on consultation on other employment matters such as collective redundancy and transfer of undertakings.⁵ The general principle in current UK law then is that in most cases there is a priority in favour of consultation with a recognised trade

⁵ Although not in the case of working time, where the relevant legislation indicates that consultation may be via a collective agreement or a workforce agreement (Working Time Regulations 1998)

union. Where such recognition exists at an establishment therefore, consultation will be with the representatives of that union, and it is for the union, in accordance with its own procedures to determine who such representatives may be. Where there is no recognised trade union there is also no uniformity in the legislation on the procedures for the election of worker representatives. Those outlined above applying to representatives of employee safety are somewhat different from the provisions applying in the case of collective redundancies and transfers of undertakings, where, in the latter cases, employers have certain responsibilities concerning the conduct of elections, the terms of office and the numbers of representatives elected.

So what is the quality of this consultation on health and safety that might be anticipated? Again, the legal position is a helpful starting point. In addition to the provisions of the HSW Act and the SRSC regulations, Schedule to Reg. 17 of the Management of Health and Safety at Work Regulations 1992 indicates that every employer should consult safety representatives *in good time* with regard to:

- the introduction of any measure at the workplace which may substantially affect the health and safety of the employees represented by the safety representative concerned
- arrangements for appointing or, as the case may be, nominating competent persons to advise on health and safety matters
- any health and safety information required to be provided to employees
- planning and organising health and safety training required for employees
- the health and safety consequences of the planning and introduction of new technologies into the workplace

Similar measures are found in reg. 3 of the H&S(CwE)Regs 1996.

Consultation in good time therefore refers to situations in which workers and or their representatives are:

- informed by their employers/managers about health and safety matters in sufficient time.
- the information provided is adequate and
- this process allows workers and or their representatives an opportunity to digest understand and respond to information.

Furthermore there is an implication that employers should listen to what workers and their representatives themselves have to say on health and safety issues and to respond. However, as we point out below, this does not mean health and safety representatives have the power to insist on this in practice.

2.2 THE LEGISLATIVE FRAMEWORK ON WORKER REPRESENTATION AND CONSULTATION ON HEALTH AND SAFETY IN THE UK

Modern approaches to regulating health and safety at work can be traced to antecedents that are understood both through a managerialist paradigm and through another paradigm which is concerned with representing and protecting the separate interests of the workers. Current approaches are also closely tied to the development of broader regulatory strategies that focus on the *process* of managing health and safety.

Such a process approach was characteristic of provisions of the HSW Act 1974, introduced to implement the recommendations of the Robens Committee. Goals of improved performance were to be achieved through requiring employers to subscribe to a set of general duties in which the arrangements for preventive OHS implied employers' active management of their activities to ensure health and safety was adequately addressed. Workers themselves were not the passive objects of protective measures but had responsibilities to co-operate with their employers in their achievement. To fulfil such responsibilities it was recognised that they require information *from* and consultation *with* their employers.

The approach was by no means unique to the UK and was increasingly in evidence internationally. Indeed, arguably it was the prior existence of similar approaches in countries such as Sweden that helped to inform the Robens Committee. In the late 1980's the influence of such national developments was felt strongly at the level of the European Union. This resulted in the more explicit measures of the EU Framework Directive 89/391, requiring employers to manage health and safety in a systematic, informed and participative way. This important Directive set out the basic requirements for a systematic approach to OHS management mandatory in all member states. It obliged employers to adopt a set of preventive principles in conjunction with the use of competent advice, to achieve best practice in risk evaluation and control *while informing and consulting with workers and/or their representatives* (Vogel, 1993;Walters 2002). The Directive in turn resulted in measures in member states transposing these more precise requirements on OHS management. In the UK this was most notably found in the Management of Health and Safety at Work Regulations 1999 and the Health and Safety (Consultation with Employees) Regulations 1996. Additionally, the Directive required employers to manage a holistic concept of health and safety. Such a holistic view of the working environment did not go unchallenged and was especially the subject of British dissent. However, dissent was firmly rebuffed by the European Court of Justice when it endorsed a view that under the Treaty of Rome the work environment was inclusive of a wide range of matters that affected the organisation and intensity of work. The implications of this holistic approach are particularly significant for the meanings and expectations involved in worker representation on health and safety.

Further regulatory developments in the UK, such as the Construction, Design and Management (CDM) Regulations 1996 in construction and the Control of Major Accident Hazards (COMAH) Regulations in the chemical industry have added to the process based regulation of health and safety management in these industries. These provisions are concerned with the specific problems of the sectors concerned such as major hazards and the complexities of managing OHS in multi-employer and temporary work sites with high-risk activities. Nevertheless they are essentially aimed at regulating health and safety management within the same set of broad prevention principles that apply in modern regulation more generally.

Somewhat paradoxically, at the same time as these essentially managerialist trends were developing, the approach towards the introduction of worker representation in health and safety in the UK was through measures allowing trade unions rights in which their appointed representatives would represent the separate health and safety interests of workers. This approach is evident in the HSW Act sections 2(4), and 2(7). Under these sections of the 1974 Act recognised trade unions could appoint safety representatives and these representatives could request the establishment of health and safety committees. In addition, where safety representatives were so appointed, by virtue of section 2(6), it further obliged an employer to consult them:

“ . . . with a view to the making and maintenance of arrangements which will enable him and his employees to co-operate effectively in promoting and developing

measures to ensure the health and safety at work of the employees, and in checking the effectiveness of such measures”.

It is important to the understanding of these and subsequent developments to appreciate that their origin was not part of the managerialist paradigm that informed the Robens Report but instead the result of a long trade union campaign to create worker representatives for health and safety⁶. The arguments of the campaign were at odds with the thinking behind the Robens recommendations, a fact that is indeed pointed out in the Report of the Committee of Inquiry (Robens, 1972: 18-21). The political influence of the trade union campaign was sufficient to ensure that such a framework relating to the appointment and role of safety representatives appointed by recognised trade unions was introduced in the form of the Safety Representatives and Safety Committees (SRSC) Regulations 1977.

The SRSC Regulations enable a union to appoint safety representatives from among the employees of an employer by whom it recognised⁷. Once appointed in accordance with the regulations representatives acquire a number of “functions”. These encompass:

- representing employees in consultation with employers under section 2(6) of the HSW Act;
- investigating potential hazards and dangerous occurrences;
- examining the causes of accidents;
- investigating complaints;
- making representations to the employer;
- carrying out workplace inspections;
- representing employees in consultations with inspectors;
- receiving information from inspectors in accordance with section 28(8) of the HSW Act; and
- attending safety committee meetings.

Workplace inspections may be conducted at least every three months. In addition, a further right to inspect arises if there has been a substantial change in the conditions of work or and new information has been published by the HSE relevant to the hazards of the workplace. Inspections can also be conducted to determine the cause of notifiable accidents, dangerous occurrences or diseases and representatives are additionally entitled to inspect and take copies of statutory health and safety documents. Employers are required, subject to certain qualifications, to make available to representatives information necessary to enable them to fulfil their functions. They are also obliged to provide representatives with paid time off to perform their functions and to undergo such training as may be reasonable in the circumstances, having regard to the provisions of a supporting ACOP on the subject. Finally, employers must establish a safety committee if requested to do so by two or more representatives.

Non-SRSC rights of representation have been introduced since the SRSC Regulations. These attempt to extend the rights of employees to consultation and representation on health and safety in workplaces not covered by the SRSC Regulations. However, since both the Offshore Installations (Safety Representatives and Safety Committees) Regulations 1989 and the Health and Safety (Consultation with Employees) Regulations 1996 were adopted under Conservative governments, whose wider political agenda on employment relations was overtly hostile to trade union representation, it is not surprising that they contained little to encourage trade unions.

⁶ For further details of this campaign see Williams, 1960; Grayson and Goddard, 1975

⁷ Although the need for representatives to be appointed from amongst employees does not apply in the case of the British Actors' Equity Association and the Musicians Union

In 1990, as a result of the Piper Alpha disaster, the Offshore Installations (Safety Representatives and Safety Committees) Regulations 1989 were introduced, after many years of disagreement between government, trade unions and the offshore oil industry about the application of British health and safety provisions offshore. These regulations make provision for safety representatives to be elected from all workers in a constituency system and accord those so elected with a variety of rights which, in broad terms, equate with those laid down under the 1977 Regulations.

A further development, the introduction of the Health and Safety (Consultation with Employees) Regulations 1996⁸ occurred as a result of the need to bring domestic law into line with the requirements of the EU Framework Directive relating to workforce consultation and participation. The recognition of this need was, however, rather belated. Initially the view taken by the HSC, as well as by the CBI and the TUC, was that the Framework Directive's requirements merely required amendments to be made to the SRSC Regulations and the provision of certain employment protection rights. Representatives and safety committee members, who had been either appointed in pursuance of statutory requirements or recognised by an employer as fulfilling such roles, were therefore, under the Employment Rights Act 1996, given a right of complaint to an employment tribunal if they were dismissed or subjected to a detriment in certain circumstances⁹. In addition, the Schedules to the MHSW regulations made two changes to the 1977 regulatory regime. First, a duty was imposed on employers to provide 'such facilities and assistance as safety representatives may reasonably require for the purpose of carrying out their functions'. Secondly, the duty of consultation laid down under section 2(6) of the HSW Act was further defined and extended as described in the previous section

Two European Court decisions concerning the UK's failure to fully implement the EC's acquired rights and collective redundancy directives subsequently highlighted the fact that the above changes were insufficient¹⁰. For they left in place a situation under which employers were only required to consult in situations where unions were recognised. As a result the 1996 H&S(CwE) Regulations were introduced to deal with this problem. As we saw in the previous section, they require employers to consult with employees not covered by representatives appointed in accordance with the SRSC Regulations. This duty of consultation encompasses the same matters as those specified in the latter regulations. However, employers are given discretion as to whether they consult employees directly or via elected representatives, the Representatives of Employee Safety (RES). If the representative route is chosen, employers are required to provide representatives with such information as is necessary to (a) enable them to fully and effectively participate in consultations, and (b) carry out their functions of making representations and consulting with inspectors. They are further required to provide them with such training as is reasonable in the circumstances; such other facilities and assistance as they may reasonably require to carry out their functions; and paid time off to perform these functions and undergo training. The functions of representatives do not include the carrying out of workplace inspections, the inspection of statutory health and safety documents and the investigation of notifiable accidents, diseases and dangerous occurrences. Nor do they provide representatives with a right to request the establishment of a safety committee. In addition, in contrast to the offshore regulations, the regulations say little on how employers should make arrangements for the election of worker representatives. In particular, they are silent on such matters as the frequency with which elections should be held, the defining of electoral constituencies and the

⁸ Hereafter referred to as the H&S(CwE) Regulations

⁹ See 'Victimisation on health and safety grounds' *Industrial Relations Law Bulletin*, 546, June 1996, 2-7

¹⁰ See *EC Commission v United Kingdom: C-383/92[1994]*, IRLR, 412 and *EC Commission v United Kingdom: C-382/92[1994]*, IRLR, 392.

way in which elections should be conducted. These weaknesses are, in turn, compounded by the fact that the regulations are supported by official guidance rather than an ACOP.

In short, the H&S (CwE) Regulations represent a minimalist and essentially cosmetic approach to bringing domestic law into line with the requirements of the Framework Directive. As a result, their role in providing a regulatory base for the establishment of effective workplace representation over health and safety matters in non-union situations is highly questionable (James and Walters, 1997). This is a problem that has been acknowledged for several years and there have been moves to address it. Of particular note was the HSC Discussion Document in 1999 outlining a case for consolidated regulations and identifying a number of other improvements to the regulatory base for worker representation on health and safety. Following the responses to the Document, it was announced that such regulations could be anticipated. However, three years later there was no further progress on producing them and at the end of 2003 the HSC announced efforts to draft them had been shelved¹¹. Instead in March 2004 HSC issued an agreed voluntary ‘statement of principle’ on the role of employee representation in health and safety (HSC 2004). That this remains a contentious issue is evidenced by the report of the House of Commons Work and Pensions Committee in July 2004¹², which disagreed profoundly with the HSC position, stating that:

‘... if safety representatives were empowered to enforce health and safety law in the workplace, we believe this would have a powerful effect in improving standards’

and recommending:

‘...by October 2005 the HSC/E publishes proposals to develop improved rights to consultation for employees particularly in non-unionised workplaces, including rights of Enforcement through Employment Tribunals and private prosecution routes (para 241)

2.3 THE EFFECTIVENESS OF REPRESENTATIVE WORKER PARTICIPATION

Before looking in detail at the effectiveness of specific arrangements for representation in health and safety at the workplace, it is important to recognise that organised labour operates at a number of levels to make workplaces safer (Mishel and Walters, 2003). Trade unions were doing so for many years before representation rights were introduced by statute in the UK¹³. For example, efforts to redress workers’ health and safety concerns directly through collective action are an aspect of the institutional mechanisms of industrial relations in which trade unions are actively engaged in most countries. So too is the practice of indirectly representing workers’ interests through political lobbying for improvements to health and safety regulation and its enforcement as well as for improvements to other laws that affect health and safety.¹⁴ Workers

11 In fact, a draft set of regulatory proposals were submitted by HSE to HSC in July 2003. However, failure to agree on their content by HSC resulted in the draft being rejected and the decision to proceed on a voluntary basis.

12 See House of Commons, Work and Pensions Committee (2004)

13 It is reaching considerably beyond the brief of our research to provide an historical review of the involvement of trade union in improving health and safety. However, for some indications of this see, Weindling, (1985); Bartrip and Burman, (1983).

14 Formal representation through tripartite bodies set up since the HSW Act are another means of representing workers’ interests. It is therefore surprising that there has been no evaluation undertaken of the role of the many tripartite committees established under the HSW Act in terms of their contribution to improving OHS. Given the considerable emphasis placed on this approach under the Act as well as the present Government’s more recent change of direction in such emphasis – from single channel arrangements between trade unions and employers to widening

fatigued by overwork, who are temporary and poorly trained and those who are forced to work too long to secure a basic income, all face higher risks to their health and safety (Quinlan *et al*, 2001a; Quinlan *et al*, 2001b). Risks that arise from these kinds of situations and which are associated with work reorganisation and intensification generally, are directly combated by the role trade unions play in delivering better working conditions and indirectly through negotiating higher wages and the option for shorter hours (Landsbergis 2003 a; Landsbergis 2003 b). Trade unions are also a positive support for workers who suffer ill-health as a result of working conditions. US studies on trade union involvement in programmes to reduce or prevent occupational stress indicate that:

‘labour unions have undertaken a variety of activities . . . to reduce or prevent the health hazards associated with occupational stress’ (Landsbergis *et al* 1994).

US research found that ‘workers with unions at the workplace had an approximately six times increased rate of filing a likely work related musculoskeletal disorder (MSD) claim for workers’ compensation’ and that unions promoted earlier identification of strain injury cases, making effective preventive interventions possible (Morse *et al* 2003).

Other studies have shown that the presence of trade unions may affect various measures of health and safety organisation. Such evidence is found at a number of levels. We concentrate here only on evidence that is central to the theme of the present research.¹⁵

Indirect evidence of the effect of worker representation is found in a number of studies that consider the relationship between representative worker participation and better OHS management activities. Using techniques such as proxy indicators of likely improved health, safety or well-being (matters that are difficult to measure as well as problematic to interpret even if they are successfully measured), these studies investigate the relationship between, for example, the presence or absence of worker representatives, trade unions, joint health and safety committees or health and safety clauses in collective agreements and specific aspects of OHS management activity undertaken by employers. The measures of such activity vary between studies but include such things as, the presence of health and safety policies and their communication to workers, provision of improved health and safety information and training, the use of health and safety practitioners, presence of written evidence of risk assessment, health and safety audits and inspections, accident investigations and so on. Generally, they indicate that participatory workplace arrangements are associated with improved OHS management practices of this sort that, in turn, could be expected to lead to improved OHS performance outcomes. A range of early studies of this kind are reviewed by Walters (1996). They include investigations on the role of joint safety committees in the UK (Beaumont *et al*.1982, see also Coyle and Leopold, 1981) and in the US (Kochan *et al* 1977)¹⁶ in which improved health and safety management practices such as those mentioned above, were found to be associated not only with the presence

stakeholder participation — it is curious that no proper evaluation of such formal representation has ever been undertaken (Walters 1999).

15 It is nevertheless important to note that there are other studies as well as publicly expressed opinions of stakeholders broadly supporting claims that trade unions and worker representatives are effective in improving OHS. See for example Ochsner and Greenberg (1998) on the opinions of OHS professionals that worker representation is a significant factor promoting effective OHS improvements. Recent statements from spokespersons for OHS management tell a similar story. For example, senior OHS staff in General Motors in the US have commented about the value of trade union involvement in OHS management in reducing plant injury rates, with resulting financial savings, as well improving the identification and remedy of health and safety problems (TUC, Risks 102)

*16 Findings in other countries are broadly comparable, see for example, Bryce and Manga, 1985 for Canada, Roustang, 1983; Cassou and Pissaro 1988 on France, Assennato and Navarra (1980) on Italy and Walters *et al*, 1993 for EU countries generally.*

of joint health and safety committees but with well trained committee members and the use of established channels for relations between management and workers.

A series of Australian studies, again using similar indicators of health and safety management activity, generally support the positive relationship between the presence of representative participation and better H&S management arrangements. In addition however they further conclude that the introduction of such representative arrangements also lead to major changes in attitudes towards health and safety on the part of both workers and management (Biggins *et al* 1991, Biggins and Phillips 1991a, b; Gaines and Biggins 1992 Biggins and Holland 1995; Warren-Langford *et al*, 1993). While in Canada, a study commissioned by the Ontario Workplace Health and Safety Agency “found that 78-79 per cent of unionised workplaces reported high compliance with health and safety legislation with only 54-61 per cent of non-unionised workplaces reporting such compliance” (cited in O’Neill 2002).

Recent studies in the UK indicate that (trained) representatives stimulate and participate in workplace OHS activity through engagement with management structures and procedures, tackling new OHS issues and ‘getting things done’ to help resolve health and safety problems (Walters *et al*, 2001). Even in small workplaces, regional representatives stimulate ‘activation’ of health and safety as well as engaging with employers and workers in more prescriptive aspects of their tasks such as inspecting workplaces as is amply shown in the Swedish experience (Frick and Walters 1998, Walters 2002). Evaluation of the Worker Safety Advisor pilot scheme in the UK provided detailed evidence on how “ the activity of Workers’ Safety Advisors can make a difference to the standards of health and safety practice at small workplaces” (Shaw and Turner, 2003). Specifically, the evaluation found that:

- Nearly 73% of employers said awareness had increased on health and safety matters and a third of employers stated that communications had improved
- Over 75% of employers said they had made changes to their approach to health and safety as a result of the pilot with those changes taking place in:
 - Revising or introducing new policies and procedures (61%)
 - Regular health and safety discussion with staff (21%)
 - Risks assessments being carried out (11%)
- Nearly 70% of workers observed an increase in the amount of discussion on health and safety
- The pilot facilitated the creation of safety committees in some workplaces and joint working on risk assessments and training for workers.

Such findings are further supported by reviews of experiences in other European countries such as Norway, Italy and Spain where the engagement of trade unions and peripatetic workers’ representatives are influential in raising awareness and contributing to the establishment of better OHS arrangements in small firms (see Walters 2001 and Walters 2002). There is also evidence that the presence of workplace trade union organisation influences the enforcement of OHS regulation (for example, Robinson, 1991; Weil 1991; Weil, 1992). The work of preventive services has also been shown to be enhanced by such local union presence (Frick 1994). In addition it has been argued that objective measurement of health and safety outcomes suggested links between rising levels of accidents and the declining influence of trade unions in the UK

during the 1980s (Tombs 1990).¹⁷ More recently in the US, declining trends in OSHA claims have been related to declining unionisation (Siskind, 2002).¹⁸

This research does not attempt to establish a direct relationship between the role of worker representation and objective indicators of improved health and safety performance such as injury rates. There are however some efforts to do so. These include studies of specific exposures, where research demonstrates that incidences of ill-effects were greater in non-unionised situations. For example, Fuller and Suruda (2000), show that deaths from hydrogen sulphide poisoning were more frequent in non-unionised workplaces than unionised ones in their study of occupationally related hydrogen sulphide deaths in the United States. Further examples include a comparison of health and safety outcomes for unionised and non-unionised construction workers in the US (Dedobbeleer *et al* (1990) and Grunberg's (1983) early work on health and safety in manufacturing in Britain and France. Both of these studies indicate that better standards of health and safety were achieved in unionised workplaces than in non-unionised ones. A Norwegian study found that improvement in sickness absence was greatest where firms had adopted a participatory approach and where trade union representatives were active (Anderson 1994).

Studies of joint arrangements and their relationship with objective indicators of OHS performance are not entirely in agreement concerning the beneficial effects of such arrangements. In the US for example there have been a range of studies on the role of joint health and safety committees in which no association is found between the mere presence of committees and improved health and safety performance. But improvements were associated with particular facets of their operation, such as the presence of trade unions, and trained participants for example (Boden *et al*, 1984; Cooke and Gauthi (1980) and Kochan *et al* 1977). Similar associations were reported in early British studies (for example, Beaumont *et al* 1982). In Canada, Lewchuck *et al*, (1996) found that the presence of joint health and safety committees was associated with reduced lost-time injuries. The Canadian Labour Congress cites a 1993 study commissioned by the Canadian Ministries of Labour that concluded that union-supported health and safety committees have "a significant impact in reducing injury rates."¹⁹ Havlovic and McShane, (1997) also concluded that 'there was some support for the idea that structured joint health and safety committees activities help to reduce accident rates'. Although, in an earlier comparative study on the North American logging industry, Havlovic, (1991) found that while joint safety committees were associated with improved fatality rates they were one of a number of factors associated with such improvements. Others included training, enforcement and changes in managerial practices. Shannon *et al* (1996) found that 'participation of the workforce in health and safety decisions' was one of several factors related to lower claims rates. In an overview of Canadian work on this subject Shannon *et al*, (1997) suggested that 'empowerment of the workforce' was one of a number of organisational factors consistently related to lower injury rates. In an earlier study Shannon *et al*, (1992) indicated that such 'empowerment' included the presence of unions and shop stewards, union support for worker members of joint health and safety committees and general worker participation in decision-making. A study of OHS committees in public sector workplaces in New Jersey found that committees with more worker involvement reported fewer illnesses and injuries (Eaton and Nocerino, 2000: 265). A recent Irish study compared actual injury rates on construction sites with perceptions of workers and managers, the risk management system in place and OHS enforcement. It found 'the variable with the strongest relationship with safety compliance is the presence or absence of a safety representative'. It suggests:

¹⁷ See also Nichols (1997)

¹⁸ In 1991 Weil noted that implementation of the Occupational Safety and Health Act in the US was highly dependent on the presence of a union at the workplace. Siskind (2002) subsequently observed that following the trend of declining unionisation, OSHA claims dropped from their peak of over 71,500 in 1985 to 37,500 in 2002.

¹⁹ Referred to in O'Neill 2001

‘ . . . what is most eloquent about these results is the lack of any other significant relationships. In particular the general safety management factor is not significantly associated with effective response to audits and hazards and has no influence on behaviour or compliance’ (McDonald and Hyrmck 2002).

The great majority of these studies therefore broadly support the notion that joint arrangements, trade unions and trade union representation on health and safety at the workplace are associated with better health and safety outcomes than when employers manage OHS without representative worker participation. However, there is enormous variation between them in quality, consistency, reliability and relevance to our central question concerning the effectiveness of representative participation in achieving measurable improvement in health and safety outcomes. Additionally, many of them are studies of practices in other countries, where there may be significant differences in the details of legal provisions and other supports for implementing and operating worker representation in health and safety. For these reasons we decided to concentrate on a systematic examination of British evidence of the effectiveness of joint arrangements and in the following chapter we outline our findings.

CHAPTER 3: ARRANGEMENTS FOR HEALTH AND SAFETY AND INJURY RATES – REVISITING THE EVIDENCE

3.1 TRADE UNIONS, JOINT ARRANGEMENTS AND THE WIRS/WERS DATA SETS

The Workplace Industrial/Employment Relations Surveys (WIRS/WERS²⁰), which began in 1980, have had the key purpose of providing information on the state of industrial and employment relations in the UK. They have provided, amongst other things, cross-sectional data on establishments with 25 or more employees (10 or more in 1998) for all public and private manufacturing and services in England, Wales and Scotland with the exception of some sectors such as deep coalmining, agriculture, forestry and fishing. In 1990, however, the third such survey also included information on industrial injuries. The injury data recorded were not identical to, but were broadly comparable with the then HSE major injury rate (Nichols and Guy 1993). Since the 1990 survey also collected information about different arrangements for managing health and safety, this meant for the very first time in the UK, or for that matter anywhere else, a national data set had been constructed which permitted the investigation of the determination of injury rates which could take account of both different health and safety arrangements at establishment level and a host of other variables – size of establishment, the proportion of manual workers, the proportion of men and women, the presence of trade unions and so forth.

3.2 THE INFLUENCE OF THE STUDY OF REILLY *ET AL*

Several British studies have used the results of the UK 1990 Workplace Industrial Relations Surveys (WIRS) to examine associations between injury performance and the presence of joint arrangements (see Beaumont and Harris 1993:51; Millward *et al* 1992; Nichols *et al*, 1995: 50-55). By far the most influential however was undertaken by Reilly *et al*, who published the results of their multivariate analysis of private manufacturing in the *British Journal of Industrial Relations* (Reilly *et al* 1995). Their study had as its main objective the assessment of the role played by union-appointed safety representatives and joint health and safety consultative committees in reducing the frequency of workplace accidents. To this end several independent variables were introduced. These included establishment size, the percentage of manual workers in an establishment, the percentage of female workers and the percentage of the fulltime manual workforce that were trade union members. In addition some 19 industry variables were included from the SIC 80 classification at the two-digit level and a set of 11 regional variables to capture possible industry and regional effects.

The authors assumed that the effects of trade unions on workplace injuries would be mediated through the formal health and safety arrangements in place in establishments and they distinguished eight different sets of arrangements, assigning each establishment to one of these.

A great virtue of the WIRS data sets is that, unlike aggregate industry studies, they actually tie information about particular variables, for example, the percentage of male workers, to the particular establishment for which injury data are also provided. However, the WIRS 90 survey was cross sectional by nature and limited to one point in time. As a consequence of this many establishments, especially smaller ones, recorded zero injuries. In an attempt to cope with the effects of cases where injury rates equalled zero Reilly *et al* calculated weighted least squared

²⁰ Subsequently WERS in 1998 – Workplace Employment Relations Survey

estimates using an approach developed by Cox (Reilly *et al* 1995:284; Cox 1970). They then estimated the effects on injury rates of seven different type of joint arrangement for managing health and safety against the arrangement in which health and safety was managed without any formal arrangement for worker consultation, that is, where it was dealt with exclusively by management. These different arrangements were:

HS1	joint consultative committee exclusively for health and safety matters with all employees chosen by unions
HS2	joint consultative committee exclusively for health and safety matters with some employees chosen by unions
HS3	joint consultative committee exclusively for health and safety matters with no employees chosen by unions
HS4	joint consultative committee for health and safety and other matters with all employees chosen by unions
HS5	joint consultative committee for health and safety and other matters with some employees chosen by unions
HS6	joint consultative committee for health and safety and other matters with no employees chosen by unions
HS7	a workforce representative but no committee
HS8	management deals with health and safety without any form of consultation

Estimated log odds effects for industry and region were also made relative to an omitted category in each set, namely the chemical and man-made mineral fibre group and East Anglia.

Reilly *et al's* econometric modelling led them to estimate an injury rate of 10.6 per 1000 in private manufacturing establishments where employers managed health and safety in the absence of any joint arrangements compared with a rate of 5.7 fewer injuries per 1000 where trade unions appointed all the employee members of health and safety committees. It also led them to estimate that in firms with committees but with no union representation injury rates would be 4.9 per 1000 fewer. Indeed in their conclusion, Reilly *et al* used this point to argue a case for legislation to be extended to require joint health and safety committees to be set up in non-unionised establishments.

Reilly *et al* have been widely cited by researchers and specialists on occupational health and safety management in support of participative arrangements and the role of trade unions in improving health and safety performance (see for example, in international reviews, Walters and Frick 2000:47; in the UK, Litwin 2000:2; in Australia, Bohle and Quinlan 2000:302).

Their paper has also been used extensively by the HSC and HSE in support of policy statements on the beneficial effects of trade union and worker involvement on health and safety . For example both the HSC *Discussion Document* that outlined the case for new consolidated regulations on worker involvement and the DETR/HSC strategy statement *Revitalising Health and Safety* cited the research of Reilly *et al* as showing that:

‘workplaces with trades union safety representatives and joint health and safety committees have significantly better accident records – over 50% fewer injuries – than those with no consultation mechanism’ (HSC, 1999:4; DETR/HSC, 2000:29)

More recently, the HSC ‘statement of principle’ on worker involvement and consultation on occupational health and safety cited Reilly *et al* to the effect:

‘Organisations with union safety committees have 50 % lower injury rates per 1000 than average’ (HSC 2003:10)

In relation to the Challenge Fund to promote worker involvement and consultation an HSE document again claims:

‘Evidence shows that trade unions safety representatives make a substantial contribution to ensuring significant risks to occupational health and safety are properly controlled – injury and ill-health rates are significantly lower for these workers’ (HSE 2003:3)

As we shall see later, claims such as these cannot be justified on the basis of Reilly *et al*’s research and Reilly and his colleagues must bear some responsibility for this. They assert for example: ‘the strongest reducing effects . . . are reserved for those establishments that operate exclusive joint consultative health and safety committees (albeit with varying degrees of union-nominated worker representation)’ (Reilly *et al* 1995: 281) and they proceed to make some precise-sounding claims – for example that ‘relative to an establishment with a non-consultative management, one possessing a consultative committee containing all union-appointed safety representatives has, *ceteris paribus*, 5.7 fewer injuries per 1000 employees; establishments with some (but not all) union representation on the consultative committee have, *ceteris paribus*, 3.4 fewer injuries per 1000 employees, and those with no such representatives: (over half of the establishments in this particular category are non-union) have, *ceteris paribus*, 4.9 fewer injuries per 1000 employees’. We shall have cause to revisit some of these claims later.

3.3 REPLICATING REILLY ET AL

Despite its undoubted influence, the Reilly *et al* study has not been replicated. We therefore set out to do so using first WIRS90 and then WERS98 data. The full details of our findings and the methods used to reach them are presented in Nichols, Walters and Tasiran (2004). In what follows, we outline our methods and our main conclusions from this exercise. Details of the relevant statistical results can be found in Appendix 1.

Although Reilly *et al* do not provide full details of how they allocated cases, we reached a reasonably good approximation of their distribution and almost 99 per cent of establishments in our sample were allocated to the categories used by Reilly *et al*. In seven of the eight categories our sample means corresponded very closely to theirs.

A distinctive feature of the Reilly *et al* study is that it includes a large number of variables. Not only does it include eight different variables for the types of health and safety arrangements but additionally, 19 two-digit industry variables and 11 regional variables. When added to the other variables for establishment size, composition, and union density this makes a grand total of 42 variables. Of course injury rates may have a large number of possible determinants but these 42 variables have to be seen in the context of a data set that consists of only 432 private

manufacturing establishments. Although this is not immediately apparent from the way that Reilly *et al* present their paper, this means that in some cases frequencies were very small indeed. For example, it is not only the case with respect to the variables for health and safety arrangements that, as Reilly *et al* tell us, some are very small (two are restricted to 3 per cent of cases each — actually to 13 establishments). The large number of industry variables means that inevitably, some of the industries included in the multivariate analysis have even fewer cases than this, in one instance, only four establishments being included. To anticipate our findings, this makes for some scepticism about how robust a model constructed on this basis might prove to be.

The fragility of the model became apparent when we attempted to calculate Cox-corrected logistic estimates. Like Reilly *et al*, and in keeping with what the existing literature would suggest, we find a significant and negative estimate for the effects on the injury rate of size and the percentage of females in an establishment and a positive relation for the percentage of manual workers. Like them, we find no significant relation between the union percentage and the injury rate. The latter finding is not surprising given the complexity of the relations involved (Nichols 1996:149-51). However, our findings fail to replicate those of Reilly *et al* with respect to the very part of their analysis that is vital to the debate over policy.

As intimated earlier, Reilly *et al*'s results are not as convincing as often thought, even considered on their own terms. Only three of the eight variables they constructed to capture how health and safety is arranged were actually found by them to have a significant relation with the injury rate when compared to the base case, where management deals with health and safety alone, that is without any form of consultation. These were:

- HS1: where there is a joint consultative committee exclusively for health and safety matters with all employees chosen by unions,
- HS3: where there is a joint consultative committee exclusively for health and safety matters with no employees chosen by unions
- HS5: where there is a joint consultative committee for health and safety and other matters with some employees chosen by unions.

Because of the very small number of cases involved, Reilly *et al* themselves warn about the validity of the third of these. In effect then, their findings come down to two cases, in one of which, none of the employee representatives on joint committees were chosen by trade unions. Such results do not sit well with the reports of their findings presented earlier – for example the claim by HSE that ‘Organisations with union safety committees have 50 % lower injury rates per 1000 than average.’

In our own attempt to replicate the analysis by Reilly and his colleagues both HS1 and HS3 ceased to be significant. HS5 is significant and negatively related to injury rate compared to the situation where management alone decides, but this finding rests on only 12 cases, one less than the 13 that Reilly *et al* themselves warn about.

The upshot is, then, that we failed to determine any reliable results for the effects of the specific health and safety arrangements distinguished by Reilly *et al*. There was a general lack of statistical significance in both our results and those of Reilly *et al*. For industries Reilly *et al* had five significant results of which only one was confirmed by our attempted replication as being both significant and having the same sign. For regions Reilly *et al* have five significant results. Only two of these were confirmed by our analysis as being both significant and having the same sign.

The estimated injury rates in our study for different health and safety arrangements frequently differed from those of Reilly *et al.* Generally they were of a lower magnitude. Therefore although like Reilly *et al.*, we find our estimations of rates for joint arrangements are lower than that for OHS management in the absence of consultation, the difference between them is quite small and nowhere near that reported by Reilly *et al.* for their estimates. The base rate, which Reilly and his colleagues estimated to be 10.6 per 1000 is also much lower in our replication, 5.1 per 1000. This means that, although both our and their estimated rates for all forms of joint arrangements are reasonably close to the average observed rate for manufacturing as a whole (5.3 injuries per 1000), our changes on the base are nowhere near as pronounced as theirs.

Moreover in certain cases there were major differences between our estimates and those of Reilly *et al.* for other variables. It is most likely that such differences were in the main a result of the very small numbers of cases included in each category.

To try to understand the differences between our initial estimates and those reported in Reilly *et al.*, first we developed univariate models that enabled us to consider the relationship between each of the variables used by Reilly *et al.* and injuries, in the absence of other variables. In the main we found an expected pattern in which variables that are known to be associated with particular trends in injury rates had their expected effects.

However, we then undertook a stepwise multivariate analysis in which we were able to observe the progress of the effects of the variables on one another as more were added to our model. This resulted in the situation previously described, in which although our sample means are broadly comparable with those of Reilly *et al.* our co-efficient estimates sometimes differ markedly, in value, direction and significance.

We concluded that the fundamental reason for such differences is to be found in the extremely sensitive nature of the data set in which the behaviour of a total of more than 40 variables is investigated in a study of only 436 cases (432 in Reilly *et al.*). This suggests that minor differences in the construction of our sample, which were an unavoidable consequence of the limits of the information provided by Reilly *et al.* in the published report of their findings, led to major differences in the results of the two analyses. This leads us to conclude that the findings on the effects of various forms of joint arrangements and especially on the role of trade unions in influencing outcomes in terms of health and safety that are at the heart of the paper by Reilly *et al.*, are unreliable in demonstrating the positive role of worker participation in health and safety arrangements.

3.4 MODIFYING THE ANALYSIS

If the reasons behind our inability to repeat the results obtained in the study by Reilly *et al.* were caused by sensitivities related to the effects of such a large number of variables on a comparatively small data set, two possible ways to overcome this would be to increase the size of the data set or to reduce the number of variables involved. Increasing the size of the data set was not possible for technical reasons and therefore we sought to explore ways of reducing variables in our analysis of WIRS 90 through their combination.

We simplified the 19 industrial sector categories by utilising SIC codes for private manufacturing at the level above the two digit codes that Reilly *et al.* used. This had the effect of reducing the 19 industry categories to three aggregated ones. Similarly, we reasoned that the eight original categories for joint health and safety arrangements may have been graded too finely. We therefore amalgamated seven of the original categories as indicative of joint arrangements and

compared them with the remaining category which was indicative of OHS management in the absence of formal consultation with workers. We believed that by doing so, we could estimate the effects of joint arrangements on injury rates and compare them with the effects of unilateral OHS management arrangements, while at the same time also seeking to account for the effects of independent variables known to influence OHS performance and the industry and regional variables. In the results we obtained when we introduced these new variables into our Cox zero corrected analysis, size of establishment, the percentage of females and the percentage of manual workers were all significant and their signs were in the expected direction – larger establishments and higher percentages of females reducing injury rates and a higher percentage of manual workers increasing them. Both the coefficient estimates for industries were significant; so, too, were most of the regional coefficients. Joint arrangements were negatively estimated while unilateral management arrangements were estimated positively.

The predicted injury rates for this model were estimated at 3.4 per 1,000 employees for cases where management alone decides health and safety and 2.9 per 1,000 employees for the aggregated category of all other arrangements. This suggests a reduction of 0.5 injuries per 1,000 employees. Therefore, although the reduction is in the same direction as that estimated by Reilly *et al* its magnitude is considerably lower, as were the rates themselves lower than those estimated by Reilly *et al*.

If anything, the simplified 1990 model provides some support for the idea that health and safety is best not entrusted to management alone. However, the question arises of how robust even this much less precise finding is when tested against the later WERS 98 data set and indeed, how the original eightfold categorisation of health and safety arrangements fares when tested in the same way. Because the Reilly *et al* study has been so widely and frequently cited by concerned and authoritative bodies, we consider these questions next.

3.5 ANALYSIS OF THE RELATIONSHIP BETWEEN JOINT ARRANGEMENTS FOR HEALTH AND SAFETY AND INJURIES IN A SAMPLE OF ESTABLISHMENTS FROM PRIVATE MANUFACTURING IN WERS 98

We subjected our data for private manufacturing from WERS 98 to the same analysis as that already reported for WIRS 90. Because of differences between the two surveys however, we had to make several further adjustments as well as bear in mind that the definition of injuries used in the WERS 98 survey was somewhat different from that used in WIRS 90 and the establishment size bands are also different. We derived our categories for health and safety management using the appropriate variables identified in the WERS manual²¹ since they are not directly given in WERS98. This approach resulted in considerably fewer cases (288, after account had been taken of missing values) than those used either by Reilly *et al* or indeed by our previous analysis of WIRS. There was only one case of a joint consultative committee for health and safety and other matters with all employees chosen by unions and only two cases of joint consultative committee for health and safety and other matters with some employees chosen by unions. Our descriptive results also indicate the percentage of unionised establishments is considerably lower in our sample of WERS 98 cases compared with WIRS 90. Further differences include changes in the SIC classifications used in the two data sets, with WERS 98 using SIC 92 in which there are only

²¹ We found cases where there are committees specifically for health and safety in which there are no, some or all employee representatives appointed by trade unions, from ICOMMTEE, IJOINT, DWHICH, IREPNUM. We found cases where there are joint consultative committees also dealing with health and safety and other matters with no, some or all employee representatives appointed by trade unions from DJOINT, DAPPOINT and we found cases where there are no health and safety committees but there are worker representatives or where management deals with health and safety in the absence of representatives from ICOMMITTEE, IOTHREP.

14 two digit industry categories as compared with the 19 used in WIRS 90 which is based on the SIC 80 classification.

For Cox zero corrected logistic estimates, as with the previous results, we found the expected negative and significant estimate for size of establishment and percentage of females and a positive and significant relation and the percentage of manual workers. However, our results for health and safety arrangements were inconsistent and produced varying effects on injury rates. Given our previous findings and the explanation for them that we have already offered, we don't find these results particularly surprising and we suggest that, as before, they are the unreliable consequence of attempting an analysis in which we have too many variables and too few cases.

The estimated injury rates in our analysis of WERS 98 are strikingly different from those of both our previous analysis of WIRS 90 and that of Reilly *et al.* For joint arrangements they range from 36.7 per 1000 for HS6, to 13.7 per 1000 for HS4; with 18.8 per 1000 derived from the only significant estimate, that for HS7. The base rate for injuries estimated in the absence of joint arrangements was 19.8. However, in WERS 98 generally, injury rates are considerably higher than in WIRS 90. For example, the observed rate for manufacturing as a whole was 16 per 1000 (Cully *et al* 1999: 132, Table 6.6). The increase in magnitude we have observed in our own results is in keeping with this inflation. We assume this to be a result of the changes in the definitions of injuries used in the two surveys. In WERS 98 physical injuries resulting from work-related physical assault are included. Probably more significantly in the case of manufacturing, WERS 98 includes any type of burn or loss of consciousness. WIRS 90 limits these injuries to those arising from electric shocks²². The supporting commentary for the WERS 98 data itself suggests that the differences between the surveys in the definitions and categories of injury used 'may explain why the incidence of injuries is much higher than in 1990' (WIRS Data Set 1998: 31).

Following the logic of our previous analysis we then subjected our cases to further econometric modelling in which we firstly developed univariate models enabling us to consider the relationship of each of our variables and injuries in the absence of other variables. In the main we found a similar pattern to that previously. In a stepwise multivariate analysis, we again observed the progress of the effects of the variables on one another as more were added to our model, resulting in the situation previously presented in which it was observed that the coefficient estimates fail to demonstrate any consistent effects and differ markedly, in value, direction and significance.

Following our previous argument that the reason for this result may lie in the use of a large number of variables in comparison with the number of cases in the study we then proceeded to collapse the cases by combining them in various ways. As before our results indicate that although in this model the coefficient for the combined health and safety arrangements is negatively estimated, it is not significant and the estimated injury rates suggest a very minor change of 0.7 per 1000 over the base injury rate of 16.3 per 1000.

We conclude therefore that Reilly *et al's* findings have not stood up well to our attempts to replicate them either in relation to the WIRS 90 data on which they based their analysis or in relation to our sample of the WERS 98 data on which we have attempted a similar approach. Rather than provide supporting evidence of an effect for joint arrangements on injury rates, the above results confirm the general instability of the statistical modelling on such a data set — which is arguably the best one available in the UK or anywhere else. There is also reason to

²² Burns are amongst the most common types of injury recorded in WERS 98 (Hillage *et al* 2000)

suppose, however, that Reilly *et al*'s analysis was technically flawed. This brings us to the question of endogeneity.

The relation between trade union presence and injury rate is not a simple one since causality may flow from the latter to the former as well as the other way round. More pertinently for the conclusions of Reilly *et al*, the relation between trade union presence and type of health and safety arrangement is highly likely to be an endogenous one because at the time of the WIRS90 survey only trade union organised workplaces had the right to call for the establishments of health and safety committees. Despite this Reilly *et al* made no test for the endogeneity of their independent and dependent variables.

We explored this issue in our WERS 98 data. We tested jointly whether or not union density and joint arrangements were endogenous. We used average annual payments as an additional variable in the model because it is necessary that the number of explanatory variables in such auxiliary models must be one more than in the main model. We also tested union density and joint arrangements separately to see if they were endogenous. When tested jointly we found that the suspected variables were both endogenous. When tested separately we found that joint arrangements were still endogenous. This means they cannot be used as explanatory variables and we proceeded to use instrumented ones in our Cox zero corrected model. When we did so using amalgamated groups of variables, we found that our predicted values for joint arrangements indeed produced a coefficient estimate that was both negative and significant. Such a coefficient estimate would give establishments in manufacturing with joint arrangements a predicted injury rate of 26 per thousand which would be a substantial difference from the base of 36 per thousand, where health and safety is managed in establishments without joint arrangements.

In this particular case then, we arrive at a finding that is compatible with the idea that when management alone deals with health and safety this is likely to be less safe than when, other things being equal, joint arrangements exist. But we have not found this result in all our tests and even though we have done our best to replicate Reilly *et al* we are unable to confirm the particular conclusions that relate to separate OHS categories.

It is rare in social science for studies to be replicated. As far as we know, no other attempt has been made to replicate Reilly *et al*. Nor have other secondary analyses of the WERS 98 data set done anything to support that study's findings. Hillage *et al* (2000) analysed WERS 98 for all industries, not just manufacturing. They followed Reilly *et al* by using the Cox zero correction method and also used the same categories for health and safety arrangements. Only three of their results were statistically significant. They found cases where there was a general committee for health and safety with all members chosen by the union to have a *lower* rate than where management alone dealt with health and safety; but they also found that, where there was a specific health and safety committee with no members chosen by the union, there was a *higher* injury rate than where management alone decided; as did cases where there was a general health and safety committee with no members chosen by the union. They report undertaking further analysis based on a similar sample to that used by Reilly *et al* which also produced mixed results and they conclude: 'Our results were not consistent with those of Reilly *et al*' (Hillage *et al* 2000: 120).

A study by Robinson and Smallman 2000 also analysed WERS98 for all industries considering both injuries and ill health²³. They introduced additional variables to those included by Reilly *et al*

²³ We avoided making any estimations of the possible association between joint arrangements and measures of ill-health in WERS98 for two reasons: our purpose was to replicate the study of Reilly *et al* which concerned injuries only;

al and suggested their different results might be because the Reilly *et al* model was prone to omitted variable bias (2000: 9). Whatever the case about that, their results do nothing for the reliability of Reilly *et al*'s findings. They suggest for example that general committees with members appointed by trade unions have a significant negative effect on injury rates but that specific committees with members appointed by trade unions have a significant positive effect (2000: 28 Table 7).

A further analysis of WERS98 injury data by Litwin 2000 was pursued in a statistically unconventional manner on only a fraction of the possible cases and also did nothing to add to the reliability of Reilly *et al*'s findings. A further analysis by Fenn and Ashby 2001 again analysed all industries in WERS 98, again treating both injury and ill-health as dependent variables, though this time using count data regression methods to deal with zero observations²⁴. Their findings with respect to the effects of trade unions and joint arrangements are essentially the opposite of those of Reilly *et al*: 'the number of reported injuries and illnesses are higher as a consequence of such mechanisms' (2001: 23)²⁵.

It is clear that these additional studies of WERS 98 do very little to support the widely cited findings of Reilly *et al*. Indeed, when coupled with our own observations they further underline their unreliability.

3.6 WAYS FORWARD FOR FUTURE INVESTIGATION OF QUANTITATIVE INDICATORS OF THE INFLUENCE OF JOINT ARRANGEMENTS ON HEALTH AND SAFETY PERFORMANCE

Our analysis of WIRS leads us to conclude that occupational health and safety should not be left to management alone – but that it is not possible to support any more precise conclusions than this about the efficacy of particular joint health and safety arrangements. This has some implications for the likely effects of so-called 'direct consultation'. As noted previously, in the UK this form of health and safety consultation was introduced in the provisions of the Health and Safety (Consultation with Employees) Regulations of 1996. This was too late for WIRS90 and too early for many cases to appear in WERS98. Interestingly, the idea that such direct consultation would be effective itself rested on an uncritical reporting of Reilly *et al*. The *Draft Proposals* for this legislation (HSC 1995) were supported by a cost benefit analysis, which in turn invoked their work. It was claimed that where workforces had a representative but no consultative committee this reduced injury rates by 33 per cent and the further assumption was made that direct consultation would make for a similar improvement (cited in Nichols 1996: 208). Since such consultation is in effect at the whim of management we would not expect it to have a beneficial effect on injury rates but this particular matter remains open to empirical verification in future industrial relations surveys.

and we also doubted the adequacy of a cross sectional survey like WERS to take account of latency issues in the relationship between the work environment and health.

²⁴ *In a further exercise, we also used these methods on our WERS 98 data set. In a Poisson regression model we estimated a negative co-efficient for the effect of joint arrangements on injuries that was significant at the 4 per cent level. However, when we used a negative binomial model in order to account for the large total dispersion, although the co-efficient remained negative it was only significant at the 12 per cent level, indicating that the impact of joint arrangements could not be said to be significantly estimated.*

²⁵ *At the time of our undertaking this research, Fenn and Ashby's findings were available in the working paper cited. Since this time they have been refined and published as Fenn and Ashby, 2004. However, with regard to the point we are making they remain unaltered.*

In the meantime, the fact that we have not been able to arrive at a more precise conclusion than that the arrangements for occupational health and safety should not be left to management alone points to the need for further and more extensive research, both inside and beyond manufacturing. In our view the best way forward would be to combine both quantitative and qualitative methods, as has been attempted in the North American research by Shannon *et al* (1996) and Lewchuck *et al* (1996) referred to previously. Whatever the way in which such research is conducted, however, it will need to go beyond the analysis of information on formal arrangements for representation (for example, about what proportion of representatives trade unions appoint). It will also need to examine such matters as whether joint committees have financial powers and are recognised as negotiating committees or whether they are, in reality, peripheral to mainstream management, in which case trade union influence may be brought to bear elsewhere in the organisation. There are many other possible indicators of trade union influence which also merit examination, such as agreements that specify support, training provision and facility time for health and safety representatives, as well arrangements for their consultation. Indeed, now that the apparent precision of our knowledge of the effects of health and safety arrangements has been seen to be ill-founded, there is good cause to re-examine a whole number of issues and dynamics that may affect the determination of health and safety. No small reason for doing so is that trade union presence has declined since WIRS90 and that, partly as a consequence of EU directives, there has been increased emphasis on management taking a lead in the development of health and safety systems.

CHAPTER 4: WHAT MAKES WORKER PARTICIPATION EFFECTIVE?

4.1 THE PREREQUISITES FOR EFFECTIVENESS

There is clearly room for more detailed and rigorous analysis of the role of trade union representation and joint arrangements and measures of increased OHS activity and for improved indices of OHS performance. However, it is equally important to understand what makes health and safety representatives effective and what are the supports and constraints to their role. Walters and Frick (2000) in their review of the international literature on worker participation and the management of occupational health and safety note that features held to promote effectiveness include:

- adequate training and information
- opportunities to investigate and communicate with other workers
- channels for dialogue with management on existing problems and planned changes

They argue that the more such criteria are met, the more worker participation can be a major influence on detecting and abating work hazards. While such conditions might in theory exist in non-unionised forms of participation, such participation is unlikely to occur in an effective or sustainable way without support²⁶. British research reviewed in Walters (1996) indicated that this support for the effectiveness of health and safety representatives and joint arrangements for improving OHS included:

- legislative provisions for worker representation
- management commitment both to better health and safety performance and participative arrangements coupled with the centrality of the provision for preventive OHS in strategies for ensuring the quality and efficiency of production
- worker organisation at the workplace that prioritises OHS and integrates it in other aspects of representation on industrial relations
- support for workers' representation from trade unions outside workplaces, especially in the provision of information and training
- consultation between worker health and safety representatives and the constituencies they represent
- well-trained and informed representatives

We look at the evidence for each of these supports in more detail below.

4.1.1 Legislative provisions for worker representation

Legislative provisions underpin current arrangements for representative participation. There are several reasons why they are important. They set out minimum legal requirements that the parties involved are obliged to follow. They provide a useful framework for trade unions and employers to build on in their agreements concerning the detail of arrangements for representative participation. They help to raise the profile of the issue of worker representation on health and

²⁶ *There is little information available on the experiences of health and safety representatives that operate without trade union support, but such as there indicates that the same kind of determinants of effectiveness would apply (Spaven and Wright, 1993; Hillage et al 2000). However, it is perhaps more important to note that in most such situations sustaining support in the absence of trade unions is problematic (James and Walters 1997)*

safety and provide a conspicuous marker for *all* workers and employers to see. Legal support for the rights of workers to representation also strengthens their position in the labour relations of OHS and may be an encouragement to act in situations where otherwise fear of victimisation may prevent them from doing so. Moreover, the legitimacy that a legal framework can give representatives and their support structures may be quite a powerful factor in determining their acceptance by other actors such as employers, regulatory inspectors and OHS specialists.

Such provisions have been enormously helpful in establishing the institutions of representative participation in health and safety at workplace, sectoral and national levels. In the UK the provisions of the HSW Act on trade union representation on health and safety and the Safety Representatives and Safety Committees Regulations 1997 that were made under them are therefore amongst the best known elements of this legislation and there is little doubt that the development of the present infrastructure for representation in the UK would not have occurred to the extent it has in the absence of such measures. Surveys on coverage of joint health and safety arrangements suggest that in the years following the implementation of the Regulations in the late 1970s the access of workers to such representation increased considerably across all sectors of employment. Although the various reports during this period are not strictly comparable with one another they are nevertheless broadly indicative of this trend. For example, an HSE survey undertaken one year after the implementation of the regulations found that 79 per cent of employees surveyed were employed in establishments where there was a safety representative (HSE 1981). Workplace Industrial Relations Surveys undertaken during the early 1980s showed that there had been an increase in coverage of joint arrangements from 70 per cent to 80 per cent between 1980 and 1984, with some 90 per cent coverage in the public sector and 75 per cent in the private sector (Millward and Stevens 1984). However, Walters and Gourlay, in a large survey undertaken on behalf of the HSE in the late 1980s, found that by this time such increases in coverage had stopped. They reported a slight reduction in the overall number of workers in establishments with health and safety representatives in comparison with the previous HSE survey. The decline was most marked in workplaces that employed fewer than one hundred workers, while in the larger establishments in their survey the coverage of health and safety representatives continued to expand.

In somewhat different terms, the four Workplace Industrial/Employment Relations surveys undertaken from 1984 to 1998 provide data on the presence of three types of representation on health and safety. These are health and safety committees; joint committees dealing with health and safety and other matters; and health and safety representatives in workplaces where there was no health and safety committees. Around two thirds of the workplaces included in these surveys have had one of these forms of employee representation on health and safety during the twenty years covered by the surveys. The proportion increased from 66 per cent to 72 per cent from 1980 to 1984, fell to 57 per cent in 1990 and increased again to 68 per cent in 1998, the latter increase being attributed by the authors of the surveys to the influence of the 1996 Regulations. The relative stability of the incidence of these arrangements contrasts with the decline in other measures of employee representation such as the presence of union workplace representatives, also measured over the same period (Millward *et al*, 2000: 114-117). Finally, the WIRS/WERS series also offers another way of looking at the influence of trade unions, through their role in appointing the employee representative members of joint health and safety committees. Here, these surveys show that in 1984 and 1990 about four fifths of the respondents said that unions had chosen these representatives on joint health and safety committees, but during the 1990s, this role appears to have declined sharply. By 1998 unions were only able to appoint representatives to health and safety committees in about one third of cases (Millward *et al* 2000:158).

It is fairly evident that the legislative measures on worker representation in health and safety have also had a substantial influence on workplace industrial relations structures. It is currently estimated that there are some 200,000 trade union health and safety representatives in the UK. In other countries in the EU and elsewhere a similar impact has been noted (Walters *et al* 1993; Bohle and Quinlan 2000: 430). There are also substantial numbers of joint health and safety committees, with the majority of large organisations now claiming that they have such committees – even in non-union organisations. If the bipartite and tripartite structures that exist at sector, region and national level are added to these as well as the staff employed by peak employer and worker organisations to service all of them, the scale of the institutional structures for participative organising of the work environment becomes apparent. Its impact also should be discernable in qualitative as well as quantitative terms since the large numbers of health and safety representatives and the joint arrangements in place both inside and outside workplaces are likely at the very least to have affected the ways in which work environment issues are perceived and articulated in relations between capital and labour and contributed to a more prominent role for the work environment in the labour relations agenda. Whether, or to what extent, this is the case has not been the subject of direct study. However, indirect evidence derived from, for example, the extent of coverage of OHS in labour relations agreements, structures and procedures at enterprise level, as well as from surveys of worker attitudes and priorities is strongly suggestive that these measures are among the factors that have had a major impact on attitudes and practices in relation to the work environment.

The history of participative approaches to health and safety indicates that such arrangements were extremely slow to develop in the absence of legislative measures. It was for this reason that the demand for them became the subject of increasingly focused campaigns by concerned trade unions and sympathetic Members of Parliament (MPs) from the 1920s onwards. It became part, first of TUC policy in 1964, and subsequently, Labour Party policy around 1967 (Williams.1960; Grayson and Goddard, 1975). From this time onwards trade unions and Labour politicians made numerous attempts through both Government and Private Members Bills to achieve statutory provisions compelling employers to make joint arrangements for health and safety, until they were finally realised in the HSW Act 1974.²⁷

Throughout the whole period of campaigning for statutory measures, which stretches back to the early part of the 1930s, debate focused essentially around two issues. It was argued by the promoters of statutory measures that compulsion was necessary to oblige employers to set up joint arrangements. They pointed to the limited number of such arrangements that existed voluntarily as sufficient evidence of this. Employers' organisations and Conservative Members of Parliament that opposed the measures argued that such compulsion would destroy the spirit of voluntarism they saw as necessary for the success of joint arrangements. The second issue that came to the fore later, in the period preceding the HSW Act, was the notion expressed by the opponents of compulsion that the union workplace safety representatives that had become the focus of the trade union campaign would behave irresponsibly and damage the business interests of employers and workers alike, while contributing little to real improvements in health and safety. It is interesting to note that in the nearly thirty years that have passed since these provisions were first accommodated in the HSW Act there has been no evidence has been forthcoming to support either of these arguments.

²⁷ For example, the *Government, Employed Persons (Health and Safety) Bill 1970*; and subsequent *Private Members' Bills based on it: The Employed Persons (Safety) Bill that were introduced and reintroduced in 1971, 1972 and in 1973 by various Labour MPs then in Opposition.*

Indeed, in other countries, legislation provides representatives with significant powers that extend further than they do in the UK, including for example, the right to stop dangerous work (as in Sweden), to issue provisional improvement notices (as in some Australian states), and to engage with employers over the appointment and use of prevention services such as in many other EU countries like Germany and France. Reviews of practices in these countries demonstrate that such additional powers are used effectively and responsibly and have added considerably to the perceived authority and legitimacy of worker health and safety representatives (Walters *et al* 1993; Bohle and Quinlan 2000: 304-305).

Before leaving the question of legislative support it should also be noted that under the Health and Safety (Consultation with Employees) Regulations (1996), legislative provisions also underpin direct participation. According to these Regulations, employers may use direct consultation with workers as an alternative to making arrangements for consultation with employee representatives. However, the extent of such consultation is hard to demonstrate. In a study undertaken for the HSE at the end of the 1990s, researchers found that while 93 per cent of employers thought they consulted directly with employees over health and safety, only 53 per cent of employees thought that they did (Hillage *et al* 2000:49). Effectiveness, as we have already seen, is even more difficult to demonstrate. Indeed in their survey, Hillage *et al* (2000:82) note that while employers generally recognised that they should talk to employees:

‘What appeared to be less well established was the principle of two way consultation and the mechanisms for securing active employee involvement in matters affecting their health and safety’

In the absence of other supports, therefore, it is probable that only rarely in direct consultation would workers be able to marshal sufficient resources to either sustain the autonomy of their voice or achieve effective implementation of their objectives.

4.1.2 Management commitment

Management commitment to participative approaches to improving health and safety is important at two levels:

- support for participative arrangements for health and safety
- close association of such arrangements with core management activities that ensure quality and efficiency of production

In the UK, Walters and Gourlay (1990) noted in a series of detailed case studies concerning the effectiveness of safety representative activity, that while there were several elements of support provided by trade unions and workplace organisation, they were all contingent on the willingness of managers to engage with participative arrangements and prioritise OHS:

‘. . . whatever the level of development of trade union organisation and worker representation on health and safety, it can never be a substitute for management organisation for health and safety. Without effective management systems for health and safety and a commitment to its continued prioritisation, the role of worker involvement is severely constrained’ (Walters and Gourlay, 1990:130)

Other researchers have commented in the same vein. For example, many studies of the activities of joint health and safety committees have pointed to the important role of senior management leadership of the committee. They have further identified the need for representation on the

committee of sufficiently senior and appropriate levels of management to help to ensure that decisions made by the committee are understood and acted upon (see for example Kochan et al 1977; Coyle and Leopold 1981).

Less is known, however, about whether trade union representation has *influenced* the development of the willingness and capacity of managers to engage with joint arrangements for health and safety. There is some circumstantial evidence suggesting this effect and there is certainly a theoretical case for arguing that it would be anticipated. For example, as already noted, increases in the presence of joint health and safety committees were observed subsequent to the implementation of the SRSC regulations. They followed the increased presence of health and safety representatives brought about by the same Regulations and were either the result of their demands for joint health and safety committees along the lines laid down in the Regulations, or of action by managers in anticipation of such demands. It is possible that well established joint arrangements for health and safety that are present in hazardous industries such as those in the chemicals sector, to some extent reflect the influence of organised labour and its OHS demands in negotiations with employers. Indeed as Nichols (1997:150-151) discusses, the relatively high level of organised labour in such sectors may itself be the result of the hazardous nature of the industry causing workers to organise themselves. On a more local level, we have already noted that the comments of trained health and safety representatives indicate their influence in persuading supervisors and middle managers to 'get things done' in health and safety (Walters *et al* 2001) and that Australian research suggests that health and safety representative activity is instrumental in bringing about changes in attitudes — including changes in the attitudes of managers towards health and safety (Biggins *et al*, 1991; Biggins and Phillips 1991 a and 1991b). One of the functions for regional health and safety representatives in relation to small firms that is defined in Swedish legislative requirements is that they should 'activate' health and safety arrangements in the firms they visit. This implies influencing the owner /managers of small firms to engage in making and maintaining participative arrangements for health and safety. There is reasonably good survey evidence that Swedish regional health and safety representatives are able to achieve this in a significant proportion of the workplaces they visit (Frick and Walters 1998, Walters *et al* 2002). In the US, Weill (1999) has demonstrated that even where joint arrangements such as joint health and safety committees are mandated, it is those workplaces in which labour unions are present in which the manifestation of *activity* on OHS is greatest. So it is quite likely that the presence of active health and safety representatives and trade union organisation influences management willingness and capacity to develop and use joint arrangements for health and safety. Nevertheless this should not blind us to the equally valid observation made by Walters and Gourlay above, that in the absence of such will and capacity, worker health and safety representatives are likely to find it extremely difficult to progress OHS issues in any meaningful way.

Such observations can also be linked to the second aspect of managerial commitment, which concerns the extent to which health and safety arrangements are central to the core management activities of the enterprise. In Scandinavian accounts, one of the explanations advanced to explain why the extensive joint measures to achieve better health and safety performance, the legislative reforms of the 1970s, did not entirely achieve the success that was anticipated for them is that they were peripheral to the main management concerns of enterprises. That is, although quite highly developed and widespread in Scandinavian countries, joint arrangements were often set up alongside but separate from those that dealt with the main concerns of managing quality and production. Observers noted that as a result, in practice this so-called safety organisation had little chance of influencing the central concerns of the organisational management. Work environment issues therefore tended to be delegated to the safety organisation to resolve by itself, without recourse to either the resources or power vested in mainstream management of the organisation

and were not regarded by this management as of any really central relevance to its business interest or the quality of production. A frequent consequence of this was that while work environment issues might achieve quite a high profile amongst the concerns of workers and managers alike as a result of the activities of participants in the various health and safety institutions of the enterprise, the ability of these institutions to seriously influence the policies and strategies of the core management of the organisation in ways that would lead to significant improvements in relation to preventive health and safety was actually quite low. Most of the work of the health and safety organisation was thus by definition peripheral, reactive, and incapable of having more than a minor impact on underlying causes of work environment problems.²⁸

The problem of the so-called 'side-car effect' of this kind of safety organisation was also increasingly evident as a more holistic interpretation was placed on the nature and cause of many working environment issues. While there is nothing new in the notion that work-related injury rates are driven by the production system, in many ways the effects of work on health become more obvious when issues of its organisation and intensity are taken into account. Thus, work related ill-health of a psycho-social nature for example, can be associated with a range of management and organisational factors responsible for the way in which work is planned, its intensity, and organisation as well as the degree of autonomy and control possessed by the workers carrying it out. Similarly, the root cause of much musculo-skeletal damage (MSD) cannot be separated from the intensity and repetitiveness of work, manning levels and economies of production dictated by considerations about the way in which work is organised to achieve more effective business outcomes. The location of such organisational decisions may be quite remote from the safety organisation. It was partially the recognition of this problem that influenced regulatory reforms in Scandinavian countries in the late 1980s and early 1990s, which attempted to achieve a more systematic management of the work environment through 'internal control.'²⁹ It also led to a reappraisal of the position of worker representation by many of the major trade union confederations and a debate within the trade unions concerning the extent to which the work environment could be better integrated into more central concerns of collective bargaining with employers (Walters *et al* 1993:56-57).

These experiences are by no means unique to Scandinavian countries but are typical of those found to a greater or lesser extent in enterprises throughout all advanced market economies. Indeed, in many respects, the Scandinavian experience is probably less extreme than that found elsewhere because it is moderated by the high degree of interest in health and safety aspects of labour relations and the consequent high level of institutionalisation of participatory approaches present in these countries.

In the UK, post HSW Act regulatory strategies, following the trend in the EU generally, have attempted to achieve a more systematic approach to health and safety management. This has been undertaken through, for example, the Management of Health and Safety at Work Regulations (which are the main UK legislation transposing the requirements of the EU Framework Directive 89/391) and through guidance on health and safety management such as HS(G) 65 published by the HSE. The ideal that health and safety should be central to the core management activities of the enterprise is a strong message of such regulation and guidance. Nevertheless, it is fairly clear that for a host of reasons, in many enterprises, in reality it remains every bit as peripheral as noted

²⁸ See Frick and Wren (2000)

²⁹ The term for regulating systematic health and safety management, widely adopted during the 1990s in Nordic countries. It requires employers to integrate the internal control of the whole work environment and to do so in co-operation with workers. They are further required to annually audit the effectiveness of doing so and to make necessary revisions in the light of this.

in the Scandinavian experience. In addition, as we note in more detail in the following section, changes in the structure and organisation of work often create further pressures that are likely to disassociate health and safety arrangements that are implemented centrally from the experience of peripheral workers.

It was partly that recognition of these additional pressures towards more fragmented work organisation (and consequent breakdown in the application of OHS management), as well as the knowledge that existing arrangements for health and safety rarely engaged company level executive management, that caused HSC/HSE to adopt a greater emphasis on gaining acknowledgement and support for OHS from the most senior executive management of companies.³⁰ There are various manifestations of this. They include featuring health and safety at board level meetings, specifying named directors responsible and accountable for health and safety, featuring health and safety in company reports and promoting the ‘business case’ for preventive health and safety management, as well as the development of various ‘tools’ that can be used to benchmark company health and safety arrangements and performance. These approaches are relevant to the central issue of ensuring that health and safety is part of the core business activity of the organisation, and as such should also help to centralise joint arrangements for its effective management. The degree to which they are effective however, and the extent to which they embrace and promote a participatory approach remains to be seen.

4.1.3 Workplace worker organisation

Worker organisation at the workplace is important if joint arrangements are to be used effectively to support workers’ interests and concerns. British case studies demonstrate the significance of local trade union organisation amongst the supports for the effectiveness of participative arrangements. As Nichols (1997: 154) has written of joint health and safety committees in this context:

“...their effectiveness is likely to be a function of the trade union organisation, to which, in Britain, they often owe their existence (such points have been admirably demonstrated by case studies, e.g. Codrington and Henley, 1981; Walters 1987) and the main findings of the major research in this area by Walters and Gourlay (1990) suggests that safety committees and safety representatives work well where trade union membership is high, unions are well organised and management is committed to both health and safety and employee participation”

Thus, autonomous representative participation is normally dependent on trade union support both from within and from outside workplaces. In addition, as pointed out previously, there is evidence that suggests that local union presence can enhance the activities of other players in the organisation of preventive health and safety such as the regulatory authorities and preventive health and safety services. Many of the studies of the effectiveness of health and safety representatives to which we have already referred, also draw attention to the importance of local worker organisation in supporting and promoting the actions of health and safety representatives and enabling them to raise pertinent issues at meetings of joint health and safety committees.

³⁰ *There are of course other reasons for this, notably the level of public interest in the need for accountability at this level.*

4.1.4 Support from trade unions outside workplaces

The importance of trade union support, especially in the case of information and training, has been repeatedly demonstrated in a range of studies internationally, as many of the references previously cited attest. It has been widely reported for example that trade unions are the main source of information on health and safety that is used by health and safety representatives — including non-union ones. They are also the most trusted and valued source for information for health and safety representatives.

In the case of training, studies have established that there is a perception shared by managers, worker representatives and regulatory inspectors alike that trained health and safety representatives make for better participative practices (Walters and Frick 2000: see also Walters (ed) 2002 for examples in relation to small enterprises). However, there is a huge range of provision covered by the term ‘training’ so it is important to know more about the link between it and the activities undertaken as its result. Under UK legislation and codes of practice, trade union health and safety representatives benefit from relatively well developed rights to time off for training which should be provided or approved by trade unions or the TUC. In their study of the impact of TUC education and training, Walters *et al* (2001) concluded that the form of training provided by or on behalf of the TUC and trade unions was especially significant in supporting the activity of health and safety representatives and acting as a stimulus for its initiation and development. They argued that the content, context and means of delivery of trade union education specifically, were the keys to understanding the high value placed upon it by recipients. They further indicated that there was no form of training for worker representatives other than that provided through labour education in which such fundamentally worker-centred normative arguments on health and safety were so comprehensively adopted. They maintained that such approaches were basic to the character, quality and success of this form of training as well as a crucial reason why it was so highly valued by its recipients.

It is possible to link these findings and the arguments that support them to earlier explanations for trends in injury rates in manufacturing in the UK during the late 1970s and early 1980s.³¹ Nichols (1997:134-136) suggests that the improved injury/fatality rates of the 1970s and the worsening rates of the 1980s were more consistent with labour’s heightened ability to protect itself in the 1970s (which was followed by a decline in this respect in the 1980s) than with vague and unproven assertions about the impact of the HSW Act on OHS awareness. He further suggests that one aspect of both the strength and decline of labour over this period, with tangible impact on its ability to protect itself, is seen in the simultaneous rise and fall in the provision of trade union OHS training for health and safety representatives. Provision grew dramatically from 1975, peaking in 1978/79 and declining equally dramatically subsequently. Nichols argues (1997:136):

“Too little is known about the precise effects this training had on the workers who received it, but it is not outlandish to suggest that it made a positive contribution to their safety. It was certainly a channel through which closer trade union involvement in safety was brought about at all levels.”

Responses of representatives to questions about why they felt trade union training was effective, make it clear that the methods employed in tuition such as student-centred learning and skills

³¹ *These trends show improved fatality rates in manufacturing in the 1970s in the years following the HSW Act 1974, which failed to improve further between 1981 to 1985 while during this latter period, steadily worsening major injury rates were also experienced (Nichols 1997).*

development play a major role (Walters *et al* 2001). The key to understanding why this is so is found in the relationship between the pedagogy of trade union education and the social construction of the employment relations of health and safety. The dialogue of participation is not isolated from the power resources with which the parties enter it, or from their own constructions of what they believe reality to be. The influence of both the location and nature of such power and the issues that are its subject are therefore of central relevance to participation in health and safety³².

Theoretically trade unions play two powerful roles in the support of worker representation in health and safety. First, they enable workers to realise the economic power of collective actions and enhance the otherwise limited labour market influence of the individual. Second, they support and enhance workers' abilities to define the agendas for interaction with employers. If workers' representatives are to avoid manipulation by managers during participation in health and safety they need to enter into it with at least some resources to formulate alternatives to the views of management. One such resource is provided through trade union training, in which, particular worker and trade union centred normative arguments can be explored and strengthened, giving representatives greater confidence in the legitimacy of their perceptions and constructions of reality. According to Walters and Frick (2000):

'Occupational health and safety' itself is a complex scientific and social concept. There are wide opportunities for disputes and to question the social constructions of what is occupational health and safety "reality". For example, Nelkin (1985:19) describes, in the context of labour relations in the US, how the combination of scientific uncertainties of risks at work and a very adversarial industrial relations climate result in fundamental disagreements on the whole issue, suggesting that:

"Conflict prevails over:

- the significance of risks,
- the adequacy of evidence,
- the methodologies for evaluating and measuring risk,
- the severity of health effects,
- the appropriate standards to regulate industrial practice, and even
- the communication of risk information,".

Within approaches to participative management therefore, different issues may come to the fore, each of which may be contested by workers (representatives) and managers. They include:

- the purpose of managing health and safety
- the nature of the hazards being managed
- the means that are chosen to prevent harm to workers.

In all these scenarios trade union training supports representatives to ensure an appropriate agenda is achieved for their participation in health and safety at work. Training delivered through a labour education medium is based around a holistic definition of workers' health which includes physical, and psychosocial factors within its scope and which is entirely preventive in its orientation. It is concerned with wider explanations for health and safety in which the organisational aspects of the subject are central and it encourages maximum active participation of workers' representatives through the use of autonomous trade union criteria to define risk and its assessment. It lays great emphasis not only on information requirements of the law but how to

³² See Walters and Frick (2000) for a more detailed discussion on this point.

obtain information from employers, workers and other sources and how to understand and *use* it in communication with managers. Finally, it militates against the practice of conceptually disjoining health and safety from other aspects of labour relations, which is another major way in which managers and professionals assert normative power.

4.1.5 Support from workers

Consultation and communication with constituencies was shown to be a significant influence in the study undertaken by Walters and Gourlay (1990) on the effectiveness of health and safety representatives. Although there are now a reasonable number of studies that have considered the role of legislation, trades unions, management commitment and training in supporting representational participation, the relationship between worker health and safety representatives and the workers that they represent has been less widely researched. Nevertheless as Walters and Gourlay showed in their case studies, this relationship is clearly important. They demonstrated that lack of effective communication between safety representatives and their members was a barrier to their effectiveness in pursuing the resolution of health and safety issues with management. In case studies in which there was poor communication between health and safety representatives and the workers they represented, the representatives perceived their members as problematic in one way or another. Their most frequent complaints concerned feelings of lack of support from members when raising health and safety issues with management, unwillingness of members to take a stand over health and safety issues and lack of awareness about hazards. In these case studies there was clearly a significant gap between the consciousness and objectives of safety representatives and that of the ordinary trade union membership. However, in the same case studies, in contrast to the practice of shop stewards in the same enterprises, the health and safety representatives did not meet regularly with their members, even though health and safety featured seldom on the agenda of meetings that were held between shop stewards and members (Walters and Gourlay 1990: 98-99).

Another problem confronting active health and safety representatives is that as they gain better understanding of work environment issues, this very understanding not only brings them into conflict with the views of their employers but can also distance them from views of these issues shared among the workers they represent. A serious challenge for health and safety representatives therefore appears to be maintaining a balance between the specialist understanding they may develop concerning the detailed subject matter of the work environment and the need to remain aware of their constituents' perceptions of the same issues in order that they may continue to communicate effectively with them. It is one reason why training is important and the approach used in the methods and content of labour education for training representatives is superior to that of mere 'technical' training in health and safety. Of course this has positive as well as negative aspects. If handled properly the safety representative's conceptualisation of work environment issues and preventive OHS generally, has a powerful potential to contribute to the 'learning organisation' within an enterprise and to improve its safety climate and culture. This may be a two way process in which representatives can raise awareness of the nature and conceptualisation risks and at the same time bring workers' experience to bear on the means and effectiveness of prevention.

These issues are especially relevant to the relationship between direct and representative participation. As we have already noted, we think that these forms of participation are probably best understood in practice as part of the same continuum in workplace health and safety. Although both parts may not always be present to the same extent in any one enterprise, participation is most likely to be more effective when they are, since they have a positive effect on one another. Our observations on the significance of communication between representatives

and their constituents help to explain the means with which this synergy between direct and indirect participation takes place.

4.2 CHANGE AND REPRESENTATION

The discussion of the supports for the effectiveness of worker representation in health and safety in the previous discussion is based on evidence from research findings over the past twenty years or so. It is widely acknowledged that during this period well-documented changes in the structure and organisation of work and labour markets have taken place. These changes are important influences on the practicability and effectiveness of arrangements for worker representation and its supports. Employment and production has moved away from industries in which trade unions had a strong presence such as manufacturing, heavy engineering, coal and steel towards private services and information industries in which trade unions are much weaker. Although there are clear sectoral differences, outsourcing, franchising and downsizing by large firms has contributed to growing job insecurity, an expansion of temporary work, self-employment and growth in the number of small enterprises in the UK as well as in many other countries. Such practices have been driven by management strategies such as lean production, flexible work and engineered standards. The growing influence of neo-liberal policies in government has led to practices such as privatisation, market testing and competitive tendering, with these developments being experienced in both private and public sectors. The shape and impact of labour market shifts have also been influenced by changes introduced in the legal frameworks governing employment security, industrial relations and social welfare. Overall labour market fracturing has been characterised by significant alterations in employment location, status and practices including work organisation, work intensity and production processes. In most of these situations too, worker representation is extremely limited and the role of trade unions either absent or greatly diminished. Moreover, the changes in work organisation and labour markets are not confined to the growth of jobs that are formally short-term or insecure. Repeated rounds of downsizing by large public and private employers (and associated changes in industrial relations regimes) have meant that even workers holding nominally permanent jobs experience job insecurity.

Over the past decade there has been increased recognition that these work organisation and labour market changes are having detrimental effects on the OHS of workers (see Quinlan *et al*, 2001). For example, the competitive pressures that induce businesses to adopt the above work and organisational arrangements also encourage corner-cutting on OHS, underbidding on contracts, the use of cheaper or inadequately maintained equipment, reductions in staff levels, speeding up production, or longer work hours. These organisational forms, particularly those which involve introducing third parties to work arrangements and creating multi-employer worksites, result in fractured, complex and disorganised work processes, weaker chains of responsibility, 'buck-passing' and a lack of specific job knowledge (including knowledge about OHS) among workers moving from job to job. OHS regulation, which traditionally has assumed factory work by full-time male workers in a continuing employment relationship governed by the contract of employment, has been slow to adapt to these new work patterns and organisational forms. There is the further suggestion that such organisational forms also contribute to change in the nature of the effects of work on health and are at least in part responsible for the observed rise in the incidence of stress related and musculoskeletal conditions amongst workers.

All of these developments therefore have features that are likely to pose problems for participative arrangements for improving the work environment and make it more difficult for worker interests in OHS to be effectively represented. It is also in these circumstances that the managerial will and capacity necessary to support health and safety arrangements is likely to be

least developed and most challenged. At the same time, regulatory measures have built the principal institutions for workplace participation – occupational health and safety representatives and occupational health and safety committees – around the presumption of an identifiable and relatively stable group of employees located together or in very regular contact, and working for a single employer. This is related to the traditional labour law paradigm around which regulation of employment relations in general has been organised; with its key assumptions of permanent, full-time employment and a contract of employment as the pivot of the employment relationship, as well as a single employer responsible only under the principles of agency and vicarious liability. However, many of the work arrangements outlined above break with this tradition and weaken the nexus on which it is based to the extent that they pose major problems for the effective use of such institutions. Problems thus created are essentially of two kinds: those that reflect incomplete or inadequate legislative coverage of the emerging scenarios such as downsizing, an increased temporary workforce, outsourcing, and the not-unrelated growth of small business; and those resulting from operational difficulties with existing provisions — especially where the assumptions on which the original requirements were based no longer hold true.

An obvious problem caused by statutory provisions for worker consultation and participation in OHS management being generally crafted around the traditional labour law paradigm is that, with few exceptions, they couch the processes concerned with appointment and activities of health and safety representatives in terms of ‘employees’ and their ‘employer’. Temporary workers may therefore participate in these processes, as long as they are technically ‘employees’ of the employer in the legal sense, but contractors or agency workers working at the employer’s workplace may fall outside such a definition. Technically they are not ‘engaged’ directly by the employer, and would not be eligible for representation by a health and safety representative who is appointed to represent the employees of that employer. Similarly, employee outworkers are not employed at ‘the workplace’ for which joint arrangements may be constructed since they are usually engaged to work at home, and therefore would not be ‘at’ the workplace with their co-workers, and would therefore also not be represented. Independent contractors are further likely to be excluded from the definition of ‘employees’, and not represented.

This failure to accommodate workers other than employees means that, for example, self-employed contractors and the employees of contractors working on-site may be formally excluded from workplace arrangements, even if they are there on a long-term basis. Agency workers may have no rights to be represented in consultations between the host employer and host employees, and nor may those working for contractors or sub-contractors (including those working at home or remote from the site on a regular basis).

Contingent work has other less apparent effects on participatory mechanisms. A growth of smaller workplaces brought about by downsizing and outsourcing for example, means that in many countries fewer workplaces meet the legislative threshold for the establishment of arrangements, such as safety policies and written risk assessments or worker representation. It also of course means that even if, as in the UK, the statutory provisions allow for the appointment of health and safety representatives, because such workplaces are less likely to be unionised than larger ones, the chances of employee representation being introduced in these workplaces are also less likely. Even if they are introduced, support for them may be absent.

Home-based workers, including some teleworkers, have difficulty participating in the formation of, or accessing, joint health and safety committees or health and safety representatives established at workplaces remote from where these workers work. Moreover, ignorance amongst such workers and their particular vulnerability makes it far less likely they will exercise the other

basic 'participatory' mechanism under OHS legislation: namely the right to report OHS concerns to their employer or the regulatory agency. Research into downsizing in other countries (see for example Saksvik, 1996; Daykin, 1997) found threats to job security and an over-riding climate of cost control discouraged workers from taking sick leave, joining health promotion schemes, reporting OHS problems or taking part in health and safety committees (for similar findings in relation to contingent workers see Aronsson, 1999). Quinlan's (2003) research reports similar findings. For example, in one large bank undergoing restructuring employees were reluctant to raise OHS issues that might have cost implications. Other factors may also play a part. A Canadian study of teleworkers found they were reluctant to report health and safety problems for fear this would jeopardize their right to work at home (Tremblay 2001).

An additional critical question is the extent to which the presence of a large proportion of contingent workers may discourage the establishment of workplace joint arrangements even where OHS legislation formally mandates its establishment. This issue has not been subject to systematic investigation in the UK. However, in Australia for instance, Workplace Industrial Relations Survey (AWIRS) data for 1995 provides some indirect evidence of the impact of contingent work arrangements on participatory mechanisms. It revealed that 47 per cent of workplaces with less than 25 per cent part-timers had joint consultative committees (including workplace HSC) compared to just 30 per cent of workplaces where more than 25 per cent of the workforce was part-time (Markey et al, 2002). It is difficult to draw more from this data (unfortunately AWIRS was not repeated after 1995) than to say the presence of large numbers of part-timers in a workplace does not appear to be conducive to the establishment of consultative committees (Johnstone, Quinlan and Walters 2004).

A clear summary of the problems and more subtle effects of contingent work arrangements on participatory mechanisms is to be found in a investigation of this issue and subsequent report prepared in South Australia by the Consultative Arrangements Working Party (2001: 21). This observed:

'Participants reported that casual, part-timers, temporary and contract workers tended to be excluded from OHSW consultation and participation processes. Contributing to this was the difficulty in providing training and induction at short notice. Participants suggested that contractors and other temporary employees are not part of the culture of the organisation. It was reported that in some industries, temporary staff are often rostered on shifts where there is no HSR, or other responsible person who can provide induction or other training. This, coupled with the lack of permanency of these workers, means that they have no access to consultative processes.

The outcome of this, as participants reported, is that these workers were seen to cause 'gaps' in the OHSW system. Their activities are regarded as outside of the organisation's normal procedures for control of OHSW issues. As one person put it, 'Contractors would get away with whatever they could if the company didn't enforce it. They don't care about OHSW. They just want to get the job done and get out of there.'

Other crucial aspects to worker involvement are the right to know about OHS issues relevant to the workplace, the right to be consulted about significant changes affecting that workplace (irrespective of whether joint arrangements are in place), the right to raise issues of concern with employers, and the right to refuse dangerous work. OHS legislation requires the employer to

provide their employees with OHS information including their legislative rights and entitlements. As far as we know, there have been few, if any, attempts to measure compliance with any of these requirements. The situation with regard to temporary workers may be especially critical along with whether, and under what conditions, such information should also be provided to subcontractors. In the industries in our study, construction is covered by regulations (the CDM regulations) that address the problem of health and safety management where there are multiple duty holders at one worksite. However, because these regulations are, understandably focused on the relationship between duty holders (rather than between them and their employees) it is not clear to what extent they are effective in supporting these fundamental workers' rights of direct participation in such worksites.

Further, such workers might feel intimidated by the possibility of losing their jobs if they raise OHS issues (see Aronsson, 1999, and see also Industry Commission, 1995, Vol II, 510; Warren-Langford *et al* 1993, 596 and 604, Quinlan, 2001, Consultative Arrangements Working Party, 2001 and ACTU, 2002). The extent of these problems has not been investigated fully but it is clear that contingent and precarious workers are in a vulnerable position, and provisions in employment protection legislation offer workers who are not technically 'employees' only limited protection.

Agency workers are in an especially vulnerable position because the host employer need not give a reason for asking for a worker to be removed and the labour hire firm may be reluctant to pursue the issue (even if it becomes aware of the underlying reason) for fear of losing a client. Further, a number regulators and others (including employers) interviewed in Quinlan's (2003) Australian research indicated that some industries and employers were using labour leasing as a form of probationary employment – a situation that is likely further inhibit the reporting of problems. These inhibitions are likely to extend to the use by contingent workers of the right to refuse dangerous work. There is no dedicated research into the extent of these problems in the UK. In Quinlan's study of changing work arrangements in Australia the particular inhibitions on contingent workers raising OHS issues was repeatedly referred to by regulators in most jurisdictions (Quinlan 2003). Research elsewhere indicates the exercise of these rights is problematic even for relatively secure workers, with a Canadian study of arbitrated decisions where workers had been disciplined for refusing unsafe work concluding the right was highly circumscribed by courts and generally seen as subordinate to the employer's right to manage (Harcourt and Harcourt, 2000).

The effectiveness of participatory mechanisms depends not only on formal requirements under OHS legislation but also on the infrastructure upon which these mechanisms rely. US studies indicate that union presence increases the willingness of workers to raise OHS issues (Weil 1991, 1992; Robinson 1991). Recent Swedish research (Sverke and Hellgren 2001) points to a connection between union membership, organisational commitment and the ways insecure workers express their dissatisfaction, most notably a preference for non-unionised workers to choose an 'exit' strategy. In the UK as we discussed above, by and large the training and logistical support for health and safety representatives are provided by trade unions and they also play a more indirect role in influencing workplace joint health and safety committees. But the SRSC Regulations and the statutory provisions on joint workplace arrangements under the HSW in the UK, presumed a level of union membership and influence to make such participatory mechanisms work. A overall decline in union membership density over the past 20 years has effectively weakened this infrastructural support both at a general level and, especially in relation to some categories of contingent work such as subcontractors and temporary workers.

4.3 CONCLUSIONS: PREREQUISITES FOR EFFECTIVE PARTICIPATIVE ARRANGEMENTS

Examining the role and effectiveness of safety representatives in influencing workplace health and safety means also examining for the wider context of the employment relations of health and safety management. Therefore in this chapter we have reviewed recent international research from this broader perspective. There are different theoretical paradigms with which to understand the subject as well as many uncertainties apparent in the literature. Nevertheless, previous research broadly supports the important conclusion that the participation of workers and their representatives in health and safety arrangements is both desirable and justifiable in terms of its potential benefits.

It is evident that there are differences that formal arrangements for such participation can take as well as a range of influences determining them. There is considerable variation in the extent to which all such forms can be said to provide for genuine consultation with workers. This is especially so in the sense that they can be said to support workers and their representatives in bringing to their exchanges with their employers sufficient autonomy, legitimacy, normative and economic power to influence outcomes in the ways they desire. Nor is it the case that in many forms of participation, workers and their representatives are able to determine the terms on which they enter into a dialogue with their employers on OHS. This is because the parameters governing the type, extent and content of the participation may be set and controlled by managerial priorities, structures and procedures that lie largely outside the particular arena for participation on health and safety. To have some chance of expression and influence therefore, workers need to be able to enter into participation with some resources with which they can counter such domination. It is here therefore that the significance of health and safety representatives and trade union support for them becomes apparent. Equally, employers and their managers need to identify OHS as being of sufficient importance to their core business to wish to establish effective arrangements for its improvement and at the same time prioritise the participation of workers within them.

Previous studies show that resources for workers' participation are provided through the organisation of labour inside and outside workplaces. This supplements other necessary forms of support, including that of managerial will and capacity, to provide a set of 'prerequisites for success', including legislative support, management commitment and capacity, autonomous worker organisation and support and external inspection and control, that help to increase the chances that workers' participation in health and safety arrangements will result in outcomes reflecting their interests. However, we have also noted in this chapter that much of the research leading to the suggestion of these 'prerequisites' has been based on situations in large and relatively stable establishments with strong trade unions and conventional management structures. Changes in the structure and organisation of work pose particular challenges to participative arrangements for health and safety management not least because the number of such large and well-organised establishments has greatly reduced as a result of such changes. At the same time the capacity of organised labour to support the interests of workers has weakened – through the overall reduction of trade union membership and through the logistical difficulties of representation in increasingly fragmented organisations and smaller workplaces.

Therefore, the review of previous research literature in this field suggests several main issues that new research on the role and effectiveness of health and safety representatives should address. Amongst the most important is the continued relevance of previous findings to present situations. Further examination is needed of 'what works' today in terms of the contribution of worker participation to improved health and safety outcomes. Additionally, the main regulatory model of

worker representation on health and safety in the UK, is based on the rights and functions of trade union appointed health and safety representatives. It is widely acknowledged that it is only partially relevant to the structure and organisation of work and the every day experience of UK workers where only seven of the approximately twenty one million UK workers are trade union members. At the same time, it is quite clear from the literature that more recent regulatory efforts to address the needs of workers without access to trade union representation have been inadequate. It is also evident from recent policy discussion that some clear thinking is required concerning the social relations involved in representing the interests of workers in health and safety and within this context, what supports effective representation.

The case studies in the following chapters present opportunities to explore these issues through their examination of different kinds of arrangements for the practice of worker representation on health and safety in a variety of work situations. The aim is to examine the effectiveness of safety representatives in influencing workplace health and safety. To do so, the role of the above prerequisites for effectiveness are investigated in conjunction with other features of management organisation and labour relations in the operation of joint arrangements. Particular attention is also paid to the impact of the kind of structural and organisational changes that we have outlined in the present chapter on these arrangements and to identifying ways in which both employing and labour organisations seek to overcome the problems that these create.

The case studies permit a variety of situations to be investigated in which there is a potential for different forms and combinations of worker participation to operate within arrangements for OHS management. They provide an opportunity to observe the degree of interaction between these forms and allows us to test some of the notions advanced in the literature reviewed in this chapter concerning the nature of workers' participation in health and safety. It further allows investigation of some of the outcomes of participatory approaches to OHS management and in this respect, consideration of the views, not only of managers and workers representatives but also of workers themselves. Through this combination of approaches we aim to gain a better understanding of both the role of participation in OHS management and its impact on the quality of workers' experience of their work environment.

The case studies were selected to provide examples of firms that demonstrate a range of participative arrangements in chemicals and construction including:

- participation/representation through trade union health and safety representatives
- participation/representation through non union health and safety representatives
- no participation/representation structures at all

This enquiry is especially timely as there has been considerable discussion concerning the possible introduction of new regulations on worker representation in recent years. Although the HSC has for the time being decided to proceed on the basis of an agreed voluntary statement of principle on consultation, the current regulatory position is nevertheless widely acknowledged to be problematic in a number of respects.

PART 2: REPRESENTATION AND CONSULTATION IN TWO INDUSTRIES: THE CASE STUDIES

In this part of the report the results of our study of health and safety arrangements in chemicals and construction are presented. The chemicals industry was selected for detailed study partly because based on previous evidence it was thought likely there would be fairly conventional establishments with well established arrangements for health and safety management in which prescriptions for systematic health and safety management were implemented prevalent in the sector. Construction was chosen in contrast, because of the challenges it is well known to present to health and safety management, brought about by the complexity and fragmentation of the structure and organisation of work in the sector.

The case studies span a range of health and safety performance and a variety of arrangements for health and safety management, within which there are different approaches to securing and supporting the participation of workers and their representatives. We will examine these approaches to participation in relation to perceptions of the effectiveness of arrangements for worker participation by managers, worker representatives and workers themselves and other assessments of health and safety performance.

Each sector is approached in the same way. First an outline of the industry and its health and safety performance is presented, then the sector case studies are introduced and indicators of health and safety experiences in the case studies are given. These are based on a combination of results obtained from the questionnaire survey, interviews and documented evidence supplied by managers in some of the case studies. Notes on methodology and a copy of the questionnaire used in the survey are found in Appendix 2.

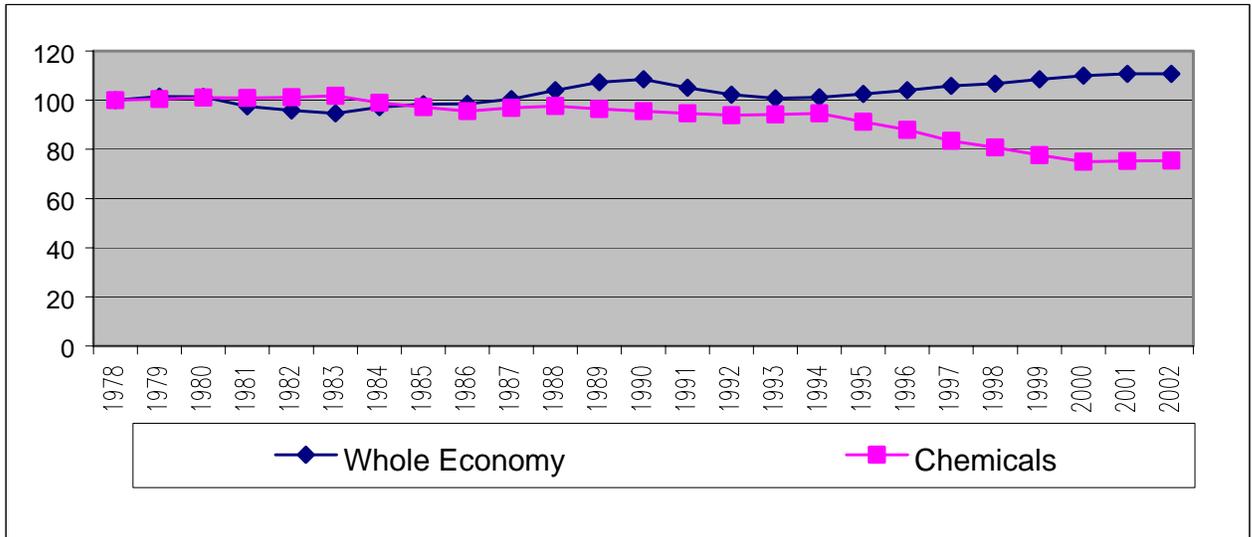
We then turn to health and safety arrangements in each of the case studies and the role of representation and consultation on health and safety within them. Here again our evidence is drawn from the analysis of responses to a questionnaire, in combination with that from interviews with workers, representatives and managers and documentation that was supplied by the organisations studied. As outlined in Chapter 1, the case studies were selected to represent varieties of company structure and organisation, arrangements for health and safety and worker representation and consultation that we believed to be fairly typical for each sector overall. As far as possible, they were selected to represent a range of health and safety performance, that we again thought to be typical for each sector, measured by injury rates, subjective criteria, and external assessment.

CHAPTER 5: THE CHEMICALS INDUSTRY

5.1 THE CHEMICALS INDUSTRY

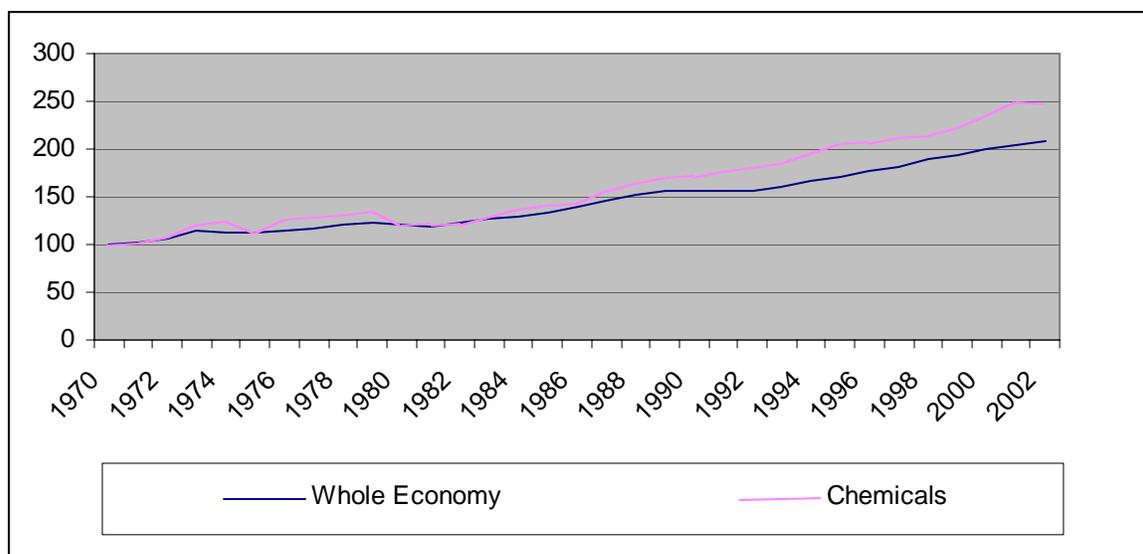
There have been developments in the industry since Dawson *et al's* study of health and safety arrangements over a decade and a half ago. According to Pearce and Tombs (1998: 159-160), there has been a tendency to shift operations towards speciality chemicals (intermediates and consumer products) and away from bulk production. This is seen in the UK industry's dominant companies, in common with those in other leading industrialised chemical economies. It has been partly responsible for the decline in the number employed in the sector in the UK since the 1980s. Nevertheless the UK remains one of the world's key chemical producing countries. Furthermore, the industry remains essentially one in which trade union organisation is still relatively well established and unions continue to play a significant role in joint arrangements, including those for health and safety. We would therefore not expect to find fundamental change in the arrangements for health and safety management discussed by previous researchers.

In 2000/01 the chemical industry had about 230,000 employees (two thirds of them men) representing around 6 per cent of employment for the manufacturing sector as a whole. Within the industry 1 per cent of men and 4 per cent of women were part-time (compared with 2 per cent and 6 per cent respectively for manufacturing as a whole) (HSE 2003). Employment in chemicals remained relatively stable until the mid 1990s, from which time there was some reduction until 2000 and relative stability since then (Figure 5.1). Production in the sector rose over the same period, following the trend in the economy in general (Figure 5.2).



Source: Office of National Statistics

Figure 5.1 Total employment (index, 1978 = 100): 1978-2002



Notes: All Values are based on 2000 Prices.

Sources: The Blue Book, Various Editions & Office for National Statistics

Figure 5.2 Gross domestic production, index (2000 =100): 1970-2002

Employment since the 1980s has been predominantly full-time and long term, with relatively little fluctuation in the employment of temporary and part-time workers other than that accounted for by economic cycles. The industry remains capital intensive and employs comparatively large numbers of non-manual, skilled and professionally trained workers – in contrast with construction. As Table 5.1 shows, employees in the industry are also better qualified than those in other sectors of manufacturing and in construction with 30 per cent possessing a degree or its equivalent in 2002.

Table 5.1 Qualifications of employees in chemicals 2002

	<i>Qualification</i>	<i>Construction</i>	<i>Manufacturing</i>	<i>Chemicals</i>
2002	Degree or equivalent	7.1	14.1	29.9
	Higher education	6.2	8.1	10.9
	GCE A level or equivalent	44.0	29.4	22.1
	GCSE grade A-C or equivalent	17.7	19.2	15.0
	Other qualification	12.2	14.3	12.9
	No qualification	12.2	14.0	8.9

Source: LFS, Autumn Quarters 2002

Chemicals has a similar age structure to manufacturing as a whole with about 8 per cent of its employees aged from 16 to 24 (10 per cent for manufacturing as a whole), 56 per cent aged between 25 and 44 (52 per cent) and 34 per cent aged 45 to 65 (36 per cent in manufacturing). A similar pattern is evident in employees' length of manufacturing service. In chemicals 37 per cent have more than 10 years tenure compared to 33 per cent in manufacturing, and about 24 per cent in construction. Employees in chemicals have higher earnings than in construction. In 2000

for example average earnings in chemicals were just under £11 an hour compared to about £8.90 in construction and £8.70 for manufacturing and the UK overall (all data from LFS 2000).

As table 5.2 indicates in 2002 union density in chemicals (23 per cent) was considerably higher than in construction (12 per cent) and only slightly lower than that for manufacturing as a whole (26 per cent), within which it experienced a similar pattern of decline over the previous ten years, both declining from a density of 33 per cent in 1992.

Table 5.2 Union membership: 1992-2002

		<i>1992</i>	<i>1994</i>	<i>1997</i>	<i>2000</i>	<i>2002</i>
Construction	N=	284561	297989	266038	272569	240575
	%	17.8	17.4	14.4	14.6	12.4
Manufacturing	N=	1650192	1491209	1366213	1159284	1056129
	%	33.2	32.7	28.4	26.6	25.5
Chemicals	N=	101062	95030	95274	72859	72533
	%	33.2	31.6	29.2	25.6	23.4
UK	N=	7608601	7172812	7052980	7111237	7035082
	%	32.1	30.0	27.3	27.1	26.5

Source: LFS, Autumn Quarters 1992-2002. 1. 1 Health and safety outcomes in the chemicals industry

5.1.1 Health and safety outcomes in the chemicals industry

The chemical industry is responsible for a range of highly hazardous operations as well as the production and use of a wide range of dangerous substances. Both pose serious risks to its workers, the public and the environment and it is for these reasons that parts of the industry are subject to special regulatory measures and a relatively high level of inspection and control. Despite these risks however, recorded injuries and ill-health suggest that with some notable exceptions, health and safety outcomes in the industry are broadly comparable with those in other sectors of manufacturing.

Trends in health and safety outcomes as indicated by the frequency and seriousness of injuries occurring to workers can be seen from examination of data on injuries and fatalities occurring at work that is required under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)³³. Despite under-reporting, it is widely accepted that that RIDDOR data is representative of the distribution of the type of injuries and their proximal causes across workplaces and in different industrial sectors.

³³ RIDDOR 95 replaced the previous RIDDOR 85 in 1996. There have been resulting changes in some of the definitions of reportable injuries which mean that data before and after the changes are not strictly comparable

Table 5.3 Injuries to employees in the chemicals industry 1990/91-2000/01

<i>Year</i>	<i>Fatal</i>		<i>Major</i>		<i>Over 3-Day</i>	
	<i>N=</i>	<i>Rates</i>	<i>N=</i>	<i>Rates</i>	<i>N=</i>	<i>Rates</i>
1990/91	5	1.6	503	158.0	3935	1076.7
1991/92	1	0.3	381	125.5	3673	1084.3
1992/93	9	3.0	341	113.9	3365	1006.7
1993/94	6	2.0	355	120.5	3056	914.8
1994/95	1	0.4	326	119.1	2996	974.8
1995/96	3	1.2	372	149.4	2658	913.8
1996/97	3	1.6	544	228.5	2672	895.2
1997/98	2	0.8	496	205.8	2504	822.0
1998/99	4	1.6	414	163.5	2167	695.1
1999/00	2	0.8	416	172.3	2305	780.4
2000/01	-	0.0	389	166.3	2208	777.3

Notes: Reported to all enforcing authorities. Rate per 100,000. Non-Fatal (major and over-3-day) injury statistics from 1996/97 cannot be compared with earlier years because of the introduction of RIDDOR'95.

Sources: HSC 1990/91 Table 1; HSE, 2001/02 Table 1&2

According to the HSE's RIDDOR data, during the 1980s and up to the mid-1990s the fatal injury rate in the chemical industry was the same or higher than that in manufacturing generally. However, a feature of the industry is the relative volatility of the fatal injury rate, caused by major hazardous sites in the industry. The serious consequences of single events at such sites can have a major impact on annual fatalities overall.

The frequency rate for major injuries has fluctuated above and below the average for manufacturing as a whole. There was a general decrease in the number of major injuries between 1986/87 and 1994/95 that was more than double the parallel decrease in the rate for manufacturing during this period. However it rose above the rate for manufacturing in 1995/96, before falling again below this rate in subsequent years. HSE figures for 2000/01 suggest a rate of 166.3 per 100,000 for the chemical industry compared with that of 186.2 for manufacturing as a whole. There has been a general decline in over three day injuries to employees reported in the chemical industry compared with manufacturing since the mid-1980s.

The distribution of the most common types of over three day injuries in the chemical industry in 2000/01 shows considerable similarities with that for manufacturing as a whole. Nearly half (48 per cent) of over three day injuries in the chemical industry in 2000/01 were sprains and strains. These were also the most common injury in manufacturing generally, where they accounted for just over one third (38 per cent) of total injuries.

The most frequent major injuries were also the same in chemicals as for manufacturing generally with fractures of upper and lower limbs accounting for over half the major injuries in both cases. Burns were more frequent in the chemical sector while lacerations and amputated fingers more common in manufacturing as a whole.

Official categorisation of the causes of injury – rather than their frequency – put the most common cause of major injury as slips, trips and falls, for both chemicals and manufacturing. By contrast, the frequency of injuries from these causes was substantially greater in chemicals than for manufacturing overall. As might perhaps be anticipated, exposure to harmful substances accounted for considerably more injuries in the chemicals sector than in manufacturing while machinery was responsible for more injuries in manufacturing than in chemicals. Handling accidents were the most common, causing a third of all reported injuries in chemicals and across the whole of manufacturing.

It is widely accepted that occupational diseases reported under RIDDOR present a picture of work related health outcomes that is seriously incomplete and are not a useful source of data to measure the extent of this problem. In their study Dawson *et al* made no attempt to present an indication of work related ill-health in the chemical industry beyond commenting on the difficulties associated with its measurement. Since that time however it has been possible to obtain a partial picture of the extent of work-related ill health from self-reported data collected through the Labour Force Survey. Analysis of this data suggests workers in the chemical industry experience similar rates of self-reported illnesses caused or made worse by their work as in manufacturing and industry overall but lower than those in construction. In 2001/02, musculoskeletal disorders upper limb disorders, asthma, dermatitis, and hearing loss were all types of ill health for which manufacturing, including the chemical industry, had estimated prevalence rates that were above the national average for people working in the last 8 years (HSE 2003). Other LFS data suggest that the proportion of workers in the chemical industry who take time off as a result of injury or ill-health is about the same as that for manufacturing and for all industries. However, such routine data is not able to accurately reflect the extent of the serious disease and mortality that can be associated with, for example, exposure to hazardous substances in the sector.

5.1.2 Health and safety arrangements in the chemicals sector

Many establishments have a long history of being subject to special statutory requirements to help to control the operation of hazardous installations and processes in the industry that represent major risks to workers, the public and the environment. Currently, such requirements are found most prominently in the COMAH Regulations. In addition there is need to manage risks associated with particular features of every day work in the sector such as the greater likelihood of exposure to dangerous substances and therefore the provisions of the Control of Substances Hazardous to Health (COSHH) Regulations are particularly relevant. However, the more generic approaches to regulating health and safety management such as found in the requirements of the MHSW Regulations also apply and are as appropriate in the chemical industry as they are for manufacturing as a whole. All these regulatory measures have in common a mandatory approach to systematic health and safety management. Such regulatory pressure combined with the comparatively high level of scrutiny from regulatory inspectorates, strong unionisation, high-profile businesses and the potential for adverse economic consequences resulting from health and safety and environmental failures, all lead to the likelihood of well developed arrangements for health and safety management in the sector.

Previous studies such as Dawson *et al* 1988 suggest that in the larger enterprises in the sector this might be anticipated to be the case. Indeed, in their study Dawson *et al* developed their ideas about arrangements necessary for self-regulation around experiences in the sector and used them as the model with which to compare arrangements elsewhere.

5.2 THE CASE STUDIES

5.2.1 General features

We now turn to the information collected on the five case studies. As with the previous sections on the industry as a whole we start with the general features of employment and organisation within the case studies before examining impressions of the work environment and various measures of health and safety outcomes.

Details on case study size, ownership and main activity can be seen in table 5.4. They comprised a range of establishment size (as measured by number of employees). There were two large establishments, one medium sized and two small establishments undertaking a range of activities involved in the manufacture and supply of chemical products and especially the manufacture of speciality products, toiletries and cosmetics. One of the two large establishments manufactured pharmaceuticals. All the establishments were part of larger companies that had more than one UK site and their ownership ranged from being part of either UK or foreign based multinational firms to being locally owned and managed.

Table 5.4 Size, ownership and main activity of the chemicals case studies

<i>Plant</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Size (no. employees/site)	116	47	723	344	268
Ownership/structure	One of two sites in UK. Owned by foreign based multinational	One of 12 sites in UK. Owned by foreign based multinational	One of 10 sites in UK & Ireland. UK based multinational	One of two sites in UK, independently owned.	One of two sites in UK, independently owned. One closed during project.
Main activity	Manufacture and packaging of liquid toiletries	R&D and specialist chemical production	Manufacture of pharmaceuticals	Formulation and manufacture of toiletries and cosmetics	Research, development and production of speciality chemicals.

Details on the establishments' workforce can be seen in Table 5.5. It was fairly typical of what might be expected in the sector. It was predominantly white, composed of a wide range of age groups of full time male workers on permanent contracts.

Table 5.5 Features of the workforce and work organisation in the chemicals case studies

<i>Case study</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Percentages						
Male		47	77	78	58	81
Ethnic minority		0	0	1	2	5
Age	16-24	19.5	13.6	7.5	16.7	2.2
	25-34	29.3	45.5	28.9	24.2	23.1
	35-44	14.6	18.2	36.9	20.9	27.5
	45-64	36.6	22.7	26.5	37.9	47.3
	65+	0	0	0.3	0.3	0
Full time		87	100	95	95	91
Permanent		94	100	83	97	99
Manual		75	14	31	56	31
Length of service	1 year or less	32	5	13	28	7
	2-5 yr	46	23	27	30	18
	6-10 yr	8	27	4	20	13
	>10 yr	14	46	56	21	63
Employer	Main employer	100	100	87	99	100
	Contractor	0	0	6	0.6	0
	Agency	0	0	6	0	0
Shift work	Production workers work day and twilight shift	Production workers work 3x8 hour rotating shifts x 5 days (no weekend working)	Production workers work 4 shifts, 6am-6pm, 2 days on, 2 days off.	Production workers work 3 shifts, early, late and nights.	Production workers on annualised hours, working 12 hour shifts. 6am-6pm x 2 shifts, 6 pm-6 am x 2 shifts then 4 days off. 5x17 day breaks pa	

The percentage of manual workers varied. A comparatively high proportion of respondents described themselves as having technical and other specialist functions in their replies to questionnaires — as might be anticipated from the data for the sector generally. In case study 2 in particular, which housed the company’s research and development facility, there was a workforce that was largely composed of specialist technical staff.

It is difficult to neatly compare the age structure of the five establishments to those of the industry as a whole but they do not look seriously out of kilter. The percentages in the middle categories,

25-44, range from 44 per cent in case study 1 to 66 percent in case study 3. Length of service also varied, but in no case did less than two thirds of the workforce have less than two years service and in some cases over 70, 80 and 90 per cent did. Generally then, the case study establishments had the kind of well-established workforce, employed on relatively long-term basis, that might be anticipated for the sector.

5.2.2 Arrangements for representation

As Table 5.6 shows, trade unions were recognised in all the establishments, with relatively high levels of membership in all except one. Also in all sites except one, there were formal structures for collective bargaining and consultation with managers, including the representation of workers through shop stewards and joint consultative committees in which local bargaining took place. As far as worker representation on health and safety was concerned, in theory all the case studies should have made arrangements to appoint health and safety representatives and joint health and safety committees under the SRSC regulations since trade unions were recognised in each establishment. However, in practice these arrangements varied considerably.

The least developed system for workers' representation was found in the small establishment covered in case study 1. Here there was a shop steward and a safety representative both belonging to one of the two unions recognised by the company. Despite the SRSC Regulations applying in the establishment, there were no formal structures or procedures for the consultation of these representatives on health and safety. Indeed, they were excluded from any form of consultation, and denied their legal entitlement to carry out functions such as involvement in risk assessment, workplace inspections, meeting members or attending trade union training courses.

In case study 2, there were two shop stewards in place, one for the process workers and one for the laboratory and office workers. A trade union health and safety representative had been appointed for the process workers, but at the commencement of the investigation he had been absent through ill-health for a considerable time. During the course of the fieldwork it transpired he would not be returning to work. There had been no replacement for him appointed by the time the fieldwork was completed. There was no health and safety representative appointed for the laboratory and office workers. The two shop stewards took little active role in health and safety on a regular basis, although in interviews they said they had made representations to management over serious issues.

In case study 3, in contrast arrangements for worker representation on health and safety were well developed. Trade unions had appointed over 30 health and safety representatives at the establishment. Workers not covered by trade union representatives (these included non-negotiated contract workers and some of the office workers) were represented by four representatives of employee safety in accordance with the Health and Safety (Consultation with Employees) Regulations 1996. There was a joint safety committee structure with a Factory Health and Safety Committee (FHSC) chaired by the site director and 8 departmental health and safety committees. Six senior health and safety representatives had a place on the FHSC, alongside senior managers, and senior specialist health and safety staff. This committee functioned as a venue for consultation, monitoring and review of establishment wide health and safety issues, policies and strategies. It held quarterly meetings. A Departmental Committee existed for various sites and activities within the establishment, including manufacturing, steroids, new products, quality, business support, site engineering and contracting. They were attended by safety representatives from the particular department as well as team managers and safety advisors. They were chaired by senior managers and generally met monthly. They functioned as venues for consultation on issues that were of direct relevance to the department and dealt with health and safety problems

that had not been resolved through normal procedures. Facility time was provided for health and safety representatives to undertake their functions, receive training and to attend committee meetings.. Representatives confirmed that generally there was not a problem with obtaining release and cover was usually supplied where necessary. Where attendance at the FHSC required representatives who were not working on site at the relevant time to be present, they were paid overtime to attend the committee.

In case study 4, which was the other relatively large establishment included in the study, there was one trade union recognised for collective bargaining. It had appointed eight health and safety representatives. Six of them represented workers in manufacturing, engineering, and the stores and two represented supervisors. Two more safety representatives were thought to be needed to complete the coverage. They were also shop stewards and could meet in that capacity when they had a problem to resolve and before meetings of the establishment's Joint Consultative Committee (JCC) if they needed to. The safety representatives did not meet together regularly before the safety committee meeting, but sometimes met afterwards. There was a factory health and safety committee, which met every six weeks. The eight trade union safety reps were members, along with a senior first aider, and a representative from Human Resources (who took minutes). The group health and safety manager attended and the works director was chair. There were no representatives for the office staff, but a representative of management interviewed said there was an understanding with the trade unions that they will take up issues on behalf of non-members. The committee appeared to have a wide-ranging agenda, from establishment-wide matters such as the purchase of new machinery (on which the trade union convenor said the representatives were informed, rather than consulted³⁴).

In case study 5, a medium to large sized establishment, ten trade union representatives served both as health safety representatives and shop stewards. There was a system of joint health and safety committees. The Factory Health and Safety Committee met quarterly and comprised all ten trade union safety representatives and eight management representatives. Because arrangements were not made for safety representatives from all five shifts to attend the factory safety committee meetings, in practice only the representatives for the shift actually working at the time attended. There was an operations consultative safety group. Three process safety representatives and one engineering safety representative were members, together with senior managers. There were also three or four area groups, which met eight times a year. Each group consisted of the area manager, plant manager, plant engineer and safety representatives or workers from that line. Other safety committees also existed for research and development and the quality control sections.

34 The convenor said that since new machines were usually bought to replace old ones, they are usually only too pleased to get a new machine, so don't complain about lack of consultation. However he thought that 'things could be improved if consultation took place'.

Table 5.6 Trade union representation in the case studies

Plant	1	2	3	4	5
Recognised Trade Unions	USDAW & AMICUS	TGWU & AMICUS	TGWU & AMICUS	TGWU	GMB & AMICUS
Per cent membership	40% union membership manuals).	86% union membership all workers).	70% union membership manual).	29% union membership manual).	75% union membership manual).
Health and safety reps.	Present	Present (but on long term sick leave)	Present	Present	Present

5.2.3. Training

Respondents were asked about the level of training they had received both on health and safety and on other matters. They were requested only to include training that took place away from their normal place of work either on or off the premises of the establishment in the last 12 months. It can be seen from Figures 5.3 and 5.4 that in several of the case studies the level of training provided was considerable, in keeping with the experience of the sector generally. For example, in case study 3 only 11 per cent of workers said they had received no health and safety training in the last 12 months and even less, (7 per cent) had not received training on any other subject during the same period.

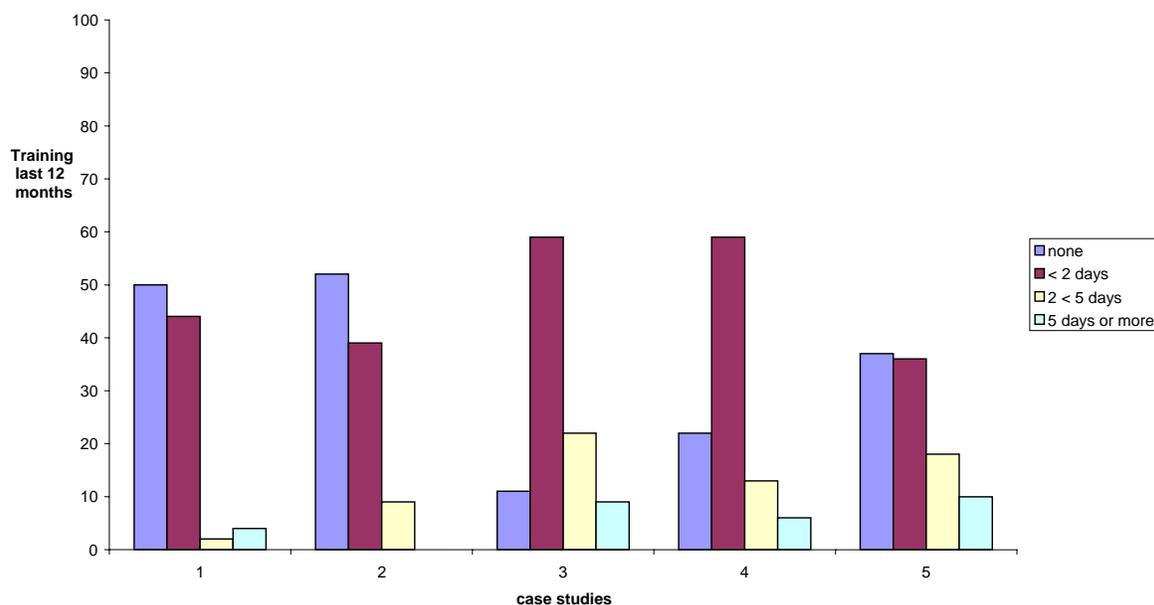


Figure 5.3 Health and safety training - chemicals

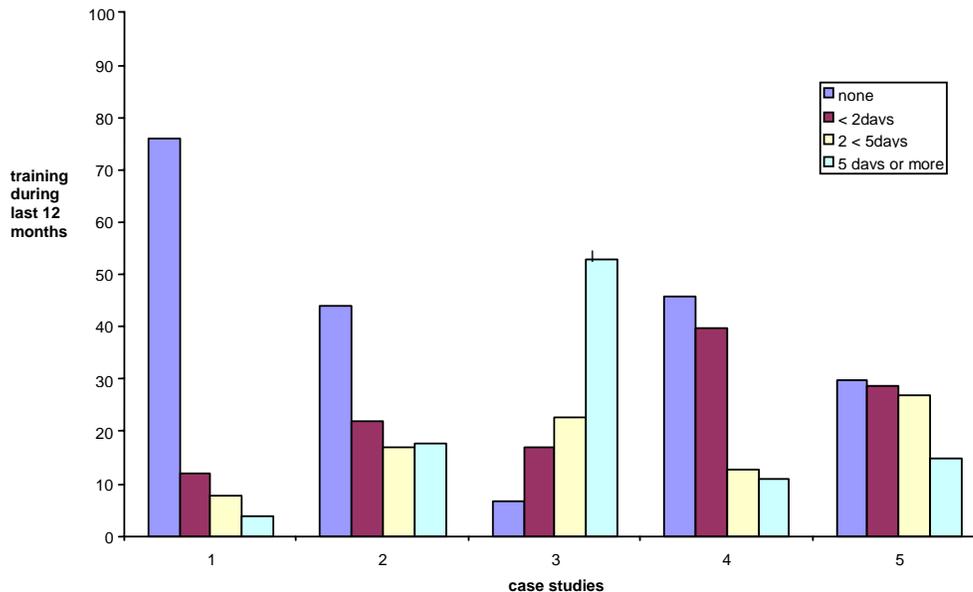


Figure 5.4 Other training

5.3 HEALTH AND SAFETY IN THE CASE STUDIES

This section first examines reported data on occupational injuries and ill-health recorded by management in the five case studies. Then information is provided about injuries and ill-health derived from respondents' answers to the questionnaire. Finally, the subjective views of respondents on the health and safety of their workplaces are presented

5.3.1 Reported injuries

Data received from the management of the five establishments is summarised in Table 5.7. For four of the case studies, data were available covering a number of years. In case study 1 however data were available for only one year (itself testimony to a lack of organisation before 2001). Annual injury rates have been calculated and compared with those for the sector as a whole as calculated by the HSE in its annual reports. The small size of some of the establishments, the limited number of case studies and the low number of incidents reported mean that there are few inferences that can be reliably drawn from the data. It is also notable that in some establishments there appear to have been years in which quite major departures from annual averages took place such as for example in 1999/00 in case study 3 and in 2002/3 in case study 4. Moreover, although the official record in case study 2 reported five years of nil injuries requiring three or more days off work, several people we interviewed expressed doubts about the reliability of the establishment's reporting systems.

Comparison with the rates for the industry as a whole suggest:

- Case studies 2, 3, and 5 currently performed better than the sector as a whole in terms of injury rates

- Case study 5 has demonstrated continued improvement in this respect in the recent years
- Case study 1 and case study 4 currently perform worse than the average for the sector

These findings are consistent with the measures of workers' experience of the work environment detailed earlier in this chapter.

Table 5.7 Reported injuries in the five case studies

<i>Plant</i>	<i>Size (no. workers)</i>	<i>No of accidents (>3days)</i>	<i>Annual injury rate per 100,000 (>3 days)</i>	<i>Year</i>	<i>HSE Sector injury rate per 100,000 (>3 days)</i>	<i>Comparison with sector + higher than sector - lower than sector</i>
1	116	3	2586	2001/02	740.3	+
2	47	0	0	1997/98	822.0	-
		0	0	1998/99	695.1	-
		0	0	1999/00	780.4	-
		0	0	2000/01	777.3	-
		0	0	2001/02	740.3	-
3	723	4	553	1997/98	822.0	-
	812	3	370	1998/99	695.1	-
	906	9	993	1999/00	780.4	+
	885	0	0	2000/01	777.3	-
	784	1	128	2001/02	740.3	-
4	344	3	344	1999/00	780.4	-
	387	2	517	2000/01	777.3	-
	398	3	754	2001/02	740.3	+
	451	10	2217	2002/03	656.4	+
5	-	7	2500.0	1996/97	895.2	+
	-	6	2142.9	1997/98	822.0	+
	-	7	2500.0	1998/99	695.1	+
	-	5 (1)	1785.7	1999/00	780.4	+
	-	4 (1)	1428.6	2000/01	777.3	+
	-	3	1071.4	2001/02	740.3	+
	268	1	357.1	2002/03	656.4	-

Notes: (1) major injury

It is also worth noting that, as far as it was possible to determine from the information available, the types of injury reported and the nature of the accidents that had caused them seemed broadly

comparable with that for the sector as a whole. That is, sprains and strains were amongst the most common injuries, a fractured arm was the only reported major injury for which information was available. Records suggested that mainly handling accidents and slips, trips and falls had caused these types of injury. Injuries resulting from exposure to harmful chemicals were also common.

5.3.2 Self reported injuries

Respondents were asked if they had experienced injury or ill health during the previous 12 months and if so, whether or not they had reported it. As might be anticipated, most respondents had not experienced such events. Of those that had, the majority said they had reported them (Table 5.8). In the case of both reported and unreported injuries, the pattern was similar to that recorded by management. That is, there was a higher percentage of such events in the two poorly performing establishments represented by case studies 1 and 4, with respondents in case study 5 also experiencing quite a lot of injuries and ill-health. (These results might be thought to provide some support for the nil injury returns made by management in case study 2.)

Table 5.8 Injuries and ill-health experienced by respondents in the previous 12 months.

<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
	N=55	N=23	N=396	N=358	N=101
% Work related injury/ill health in last 12 months and reported it	23	0	6	17	10
% Work related injury/ill health in last 12 months, not reported	8	0	2	8	5

5.3.3 Workers' views on their health and safety

The majority of workers surveyed in these establishments said they were satisfied with their working conditions (Table 5.9). However, responses to questions about their work and their health indicated that a substantial proportion of workers in all the case studies — and a majority of them in some of the case studies — believed their work to be bad for their health (Table 5.10).

Table 5.9 Workers feelings about their overall working conditions (percentage)

<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Very satisfied	2	23	24	9	12
Fairly satisfied	57	77	66	77	66
Not very satisfied	38	0	8	12	17
Not at all satisfied	2	0	2	2	4

Table 5.10 Do you think work is bad for your health?

Do you think work is bad for your health?	
Percentage who say Yes	
Case study 1	58
Case study 2	44
Case study 3	38
Case study 4	60
Case study 5	67

More specific questions on aspects of their health also showed that there were a number of forms of ill health respondents associated with their work that were common across all the case studies. They included stress, muscular pain in the back, neck or shoulders, skin complaints, headaches and fatigue. A substantial proportion of respondents in all of the case studies reported suffering from such conditions.

There were several physical conditions to which workers were exposed for more than half their time at work that were also found in most of the establishments - including noise, extremes of temperature, dusts and chemicals. Poor lighting and dangerous machinery were also found frequently. Negative aspects of job design and work organisation frequently reported in all the case studies were repetitive work and pressures of time on getting work done. Others frequently reported were the related aspects of overwork and understaffing.

Welfare facilities received more mixed views that were more specific to individual cases. They ranged from general satisfaction with the facilities to substantial proportions of respondents in some establishments complaining – and note, this is in the twenty first century in what is generally regarded as an ‘advanced’ sector - of poor provision of things such as drinking water, and changing, resting and eating facilities. Overall therefore, these findings do not give the impression of the existence of the level of satisfactory working conditions in the establishments that might at first sight be inferred from the reputation of the industry or indeed some of the key features of the case studies.

It is notable that the analysis of the respondents’ views about the health effects of their work and the risks posed by their work organisation and environment demonstrates a similar pattern to that shown by the data on reported injuries. That is, the reported injury data in both case study 1 and case study 4 indicated a health and safety performance that was poorer than the average for the sector as a whole. The current injury data for the other three establishments showed a better than average health and safety performance³⁵. Similar parallels existed for the self-reported injury and ill-health data that was provided by respondents. The small number of events represented by the injury data does not by itself allow inferences to be made about the state of health and safety in the establishments. But if all the information obtained from our various approaches to examining health and safety outcomes in the five case studies is combined it shows a range of hazards that are fairly similar across the establishments and also fairly typical for the sector generally. However, the different performance observed suggests that while these hazards may be similar,

³⁵ Although scrutiny of the history of annual reported injuries for case study 5 does show its better than average performance is a recent achievement, and in the past its performance was also poorer than the sector average.

the risks they represent for workers varied from case study to case study, with the establishments represented by case studies 2, 3 and 5 being able to manage these risks better than the other two.

It is the issue of the management of health and safety to which we now turn. Theoretical, legislative and policy approaches as well as non-regulatory guidance to systematic OHS management all emphasise the participation of workers and their representatives as essential for effectiveness. Bearing this in mind, we examine the systematicity of arrangements for health and safety in the five case studies and the role played by the representation and consultation with workers.

5.4 MANAGEMENT, CONSULTATION AND HEALTH AND SAFETY OUTCOMES IN THE CASE STUDIES

For various reasons to do with its structure, its stability and its hazardous operations, the chemical industry is one in which well-developed arrangements for health and safety management might be anticipated. However, neither such anticipated arrangements nor the improved health and safety outcomes expected of them was the consistent experience across the five fairly typical establishments studied. Instead, as we shall see, an extremely varied picture was found. It ranged from good practices and better than average health and safety outcomes in some of the establishments to far more inadequate arrangements, practices and outcomes in others. This was as true of health and safety management generally, as it was for arrangements more specifically dealing with worker representation and consultation on health and safety and the various attendant supports for their operation such as training and provision of information to workers and their representatives.

More consistent was the relationship between the operation of arrangements and outcomes within the five establishments and the various measures of health and safety conditions and performance reported in the previous sections. Thus, there were strong parallels between the health and safety performance described previously — where case studies 2, 3 and 5 demonstrated better than average present health and safety performance outcomes and case studies 1 and 4, poorer than average outcomes — and various indices of their management and consultative arrangements.

5.4.1 Senior management responsibility and commitment to health and safety management

In *case study 1*, health and safety was reported to be a standard agenda item at board meetings of the parent company. However, while the site manager and production manager were based at the establishment, the managing director and operations manager were based at the company's other site, situated some 100 miles away, as was the health and safety manager.

The health and safety manager visited the establishment for a day every 1-2 weeks and was required to submit a monthly report to the managing director that went to the board. The site manager at the time the case study was initiated had been in post for only a few months. Six months later she had left the company. She acknowledged her overall responsibility for health and safety at the site. She saw her role as ensuring all health and safety procedures were followed, that all workers were aware of hazards and that they had the requisite training but suggested that she had received little training for this role. The line leaders interviewed in case study 1 were unaware of the company's policies and procedures for health and safety.

The production manager who was regarded as the next in the line of managerial command for the site was an even more recent appointment. Both he and the site manager relied on the health and safety manager to take full responsibility for organising the health and safety arrangements at the establishment during his fortnightly visits. Line leaders were theoretically responsible for health and safety on their lines, reporting through two supervisors to the production manager.

A new safety policy had been produced following the appointment of the health and safety manager in 2001. It dealt with the responsibilities of main duty holders such as managers and supervisors and gave detail of arrangements for the safety committee, communicating safety, control of contractors, risk assessment procedures and specific hazard areas. Key personnel, including managers and supervisors, held copies and they were to be made available to others wishing to see them.

Case study 2 was an establishment in which the senior manager was named as having overall responsibility for health and safety. He was, however, also the European sales manager and as a result only present on site for part of his time. There was a site committee consisting of the site director and next tier managers who met regularly to consider 'non-business related matters' including health and safety. Auditing of the establishment was undertaken by the parent company every three years. However, the current audit had been delayed and was now a year overdue.

Case study 3 had the site director of this large establishment named as the manager with overall responsibility for health and safety. Twelve senior managers reported to him, including the Environment, Health and Safety (EHS) manager, the Production manager, the Engineering manager, the STC (contractors) manager and the Employee Health Manager. Site directors from the 10 sites operated by the company in the UK met quarterly at board meetings, where OHS was always on the agenda. Health and safety matters had featured in annual company reports since 1999. The site director also chaired the site joint health and safety committee. He set targets, including OHS targets, for all senior managers, against which they were assessed. All line managers were expected to manage health and safety matters as part of their other management responsibilities. It was evident from interviews that they knew about this and were clear about their duties. For example the Shift Team leader interviewed said:

"I have to set specific managerial objectives for the year, which include health and safety objectives. I am reviewed quarterly for progress on my objectives. Then I have an annual performance review where health and safety performance is monitored."

At the Site Health and Safety Committee meeting, the manager of each department, including Manufacturing Operations, Engineering (including contractors), Technical Development and Quality was required to present information on accidents, incidents, new actions, completed actions, overdue actions, inspections, investigations and other monitoring activities. The safety committee meetings were used as a forum for reminding managers of their accountability for the health and safety matters under their control, which meant it was also a forum in which managers were in effect accountable to the senior trade union safety representatives who were committee members.

Internal company auditors who were not employed on the site undertook a health and safety audit of the plant once every three years and insurance assessors inspected the site every two years.

In *case study 4* the managing director assumed overall responsibility for health and safety.

The company board had identified the executive director of operations as the 'safety champion'. A Group Board chaired by the managing director met monthly and received a presentation on health and safety performance from the Group Health and Safety Manager once every six months. A section on OHS had been included in the Annual Report for the first time in 2002, in response to the Turnbull initiative on corporate governance.

Within the establishment, and reporting to the executive director of operations were five directors with responsibilities for sales, marketing, commercial, technical and financial matters, including the works director. As the most senior manager at the establishment the works director had overall responsibility for the implementation and operation of health and safety for the site. Reporting to these directors were a further 20 managers including the:

- engineering manager,
- manufacturing manager
- three shift managers
- Lean Manufacturing Implementation manager,
- Group Health and safety manager

A shift manager interviewed said it was his responsibility to make sure everyone was safe and that he felt he would be liable for failure. He said he delegated some of this responsibility through the supervisors with whom he had daily meetings, at which health and safety came up every now and again.

In *case study 5* responsibility for health and safety rested with the managing director. It was an item on the agenda of board meetings to which the managing director made quarterly reports that included health and safety. The site manager believed he shared responsibility for health and safety at the site with the head of the safety, health and environment department, who was assisted by two advisers, one for health and safety and one for the environment. Health and safety responsibilities had been included in all management job descriptions and line managers were responsible for managing the risks of the activities under their control.

5.4.2 The systematicity of health and safety management arrangements

Despite the apparent commitment of senior management to health and safety in all the case studies, the systematicity with which it was delivered varied.

In *case study 1* the health and safety manager saw himself as having the major responsibility for health and safety. He confirmed that he undertook all risk assessments and workplace inspections through a programme of regular inspections/audits, which he carried out alone, and was also responsible for the planning and provision of health and safety training. There was informal discussion with workers during the inspections but the Safety Representative did not accompany him. The Site Manager and supervisors were invited to attend, but it appeared this happened rarely. Hazards identified were brought to the attention of the line leaders or supervisors, to take immediate remedial action. Hazards that could not be remedied immediately were noted on the audit report that was sent to the Site Manager, Operations Manager, Managing Director, supervisors, engineering supervisor and Research and Development. Copies of the reports were not given to the Safety Representative or to the safety committee, nor were they shown to the workers themselves. According to the health and safety manager most problems were remedied

by maintenance work within a few weeks. More costly problems were referred to the Managing Director, and considered for inclusion in the budget for the following year.

There was also an informal system of hazard reporting involving verbal reports from workers to line leaders. If hazards were not resolved by this means, the matter would be referred to the supervisor and, if necessary, to the Site Manager. The health and safety manager had introduced a formal written system of near miss reporting, where workers could return a form to him. He received about one such report per month. There was an accident book on site. The health and safety manager inspected this book during his visits. If the accident was minor, a staff member on site who has completed some health and safety training (a one-year NEBOSH certificate) investigated it. If more serious, it would be investigated by the health and safety manager.

A local GP was contracted to examine any workers with health problems.

In *case study 2* arrangements for managing OHS were dissipated as a result of the ownership changes on the site as a whole. For example, the original safety officers and the former full-time OH nurse all now worked for the company occupying the rest of the site. As a result responsibility for advising on setting up the OHS arrangements at the establishment now rested with the specialist chemical safety officer. Although skilled in chemical safety, he did not appear to have the knowledge or experience to set up and service a health and safety management system, with effective consultation mechanisms for workers and their representatives. As a consequence there were some obvious weaknesses in health and safety arrangements. For example, it was pointed out during interviews that essential health and safety training was not being undertaken. Emergency procedures for serious or imminent danger, as required under the Management of Health and Safety at Work Regulations, even though specifically requested by HSE, had not yet been instituted and fire wardens had not been appointed. The accident and ill health data were subject to under-reporting in the absence of the OH nurse who had previously taken responsibility for the reporting systems involved.

Local management were concerned about their lack of control over decision making that affected OHS issues and there was a perception that such decisions were often taken in the company headquarters, located overseas. Also, injury reporting was to the parent company headquarters. While written reporting systems for injuries and incidents were in place, and management responsibilities for follow-up defined, the view expressed by the health and safety manager was that these systems were rather under-used. Written risk assessment systems were also in place although it was suggested in the interviews that it was now a considerable time since such assessments had been undertaken and their review was long overdue.

Planned general inspections were undertaken by controllers³⁶ and operatives. Housekeeping in every area was inspected monthly by a senior manager and quarterly inspections were also undertaken but by different personnel. A system existed for the completion of Non-Conformance Reports for health and safety related incidents and according to interviewees their completion usually resulted in action being taken to remedy faults. Various specialist inspections of cooling towers, ventilation systems and biocide levels were organised by management and regularly undertaken.

³⁶ The term 'controller' referred to the person responsible for the day to day running of plant and the supervision of 2-3 process workers. There was a controller for each of the four shifts in production.

In *case study 3*, according to the EHS manager, the safety policy followed the approach to systematic health and safety management recommended by the HSE³⁷. Essentially this meant that the policy was based around achieving a systematic approach to the planning and organisation of health and safety within the company. It also included a strong element of measurement and auditing of performance in a manner that allowed for continuous review and improvement. For example, health and safety performance was measured through monitoring injuries, ill health and incidents. Risk assessments were undertaken and recorded, generally under specific regulations such as COSHH and Manual Handling. The site had a Major Accident Prevention Plan (required under the COMAH regulations). The relationship with HSE inspectors was mainly a consequence of COMAH. Inspectors visited the site once or twice a year usually in relation to COMAH but have also inspected and advised on other matters.

Each section within the establishment had its own safety plan in which specific regulatory requirements were identified as well as details implementing a systematic approach to OHS management for the section. Regular health and safety inspections were carried out by managers and by safety representatives. Written systems were in place for remedial action to be taken on matters identified during inspections. Systems were also in place for reporting hazards and unusual incidents to team managers, who were expected to take appropriate action. The shift team leader interviewed saw his role as including carrying out risk assessments, health and safety inspections, attending departmental safety committee meetings and responding to hazards reported by process workers. If he regarded such hazards as insignificant, he “bounced them back to the worker”, otherwise they were dealt with under his instruction. For more significant hazards there was a written reporting system involving completion of Hazard Reports by workers. Managers claimed that this was encouraged and believed there existed a “no blame culture”, so no one should be afraid to report health and safety issues. Indeed, *case study 3* offered a monetary reward, £20, for a Hazard Report that was accepted. 10-30 such Reports were completed per month, and around 50 per cent were accepted through a process involving a committee of 3 safety representatives and 3 managers.

Health and safety matters relating to contractors on site were managed by the construction manager, who was responsible for all contractors on site, and who reported monthly on their health and safety performance. Contractors were further subject to a disciplinary approach involving a procedure of issuing yellow or red cards to any found to be working without adequate controls. A contractor served two yellow cards or one red card would be no longer allowed to work at the site and prohibited from future work there.

The role of the environment, health and safety manager was to support the line management responsibilities for health and safety. He was assisted by a team of practitioners including a health and safety advisor, assistant health and safety advisor, environmental advisor, occupational hygienist and fire officer. They acted as the competent persons required under the MHSW Regulations 1999, supporting the management by providing advice, training and other services. They also made themselves more widely available and indicated in interviews that the EHS department was available to give advice or support to managers, safety representatives and workers alike.

Occupational health was supported by the Employee Health Department with a qualified occupational physician and Occupational Health Advisor both spending about half their time at the site. Other occupational health support offered by the Department included physiotherapy sessions. A range of medical surveillance was determined and undertaken by the Department

³⁷ Set out in detail in the publication *Successful Health and Safety Management (HS(G)65) (HSE 1997)*

following scrutiny of written risk assessments. Working with respiratory sensitisers and steroids were particular concerns and exposed workers were subject to specific surveillance. The Employee Health Department was quite extensively involved in health and safety training, suggesting that half the time of the professionals employed here was taken up with this. In addition the Department was involved in the implementation and operation of company return to work and rehabilitation policies.

In *case study 4* the company had a written statement of health and safety policy including the organisation and arrangements for its implementation and monitoring. It was produced mainly by the group health and safety manager, with input from the works director and approximately followed guidance in HS(G)65. New sections had recently been produced on home working and driving in company time. The safety policy statement was displayed on the notice boards and an accompanying health and safety manual was available on the Intranet.

However, there appeared to be limited monitoring of the success or otherwise of the policy. Nor was there evidence of environmental monitoring or health surveillance, nor of systematic inspection of premises, plant, systems, equipment etc. by supervisors, maintenance staff, managers, safety representatives or other workers to ensure effective operation of workplace precautions. Interviewees generally agreed that the policy was monitored by the accident and near miss rate. Reporting of these was thought to be fairly complete because there was a rule that prevented workers doing overtime on the weekend after they have been off sick, unless the absence was the result of an industrial injury.

The regular safety committee meetings tracked and monitored progress of the specific health and safety issues that were under review by the committee. But it did not review strategic health and safety matters, such as the operation of the risk control systems. Overall, the establishment appeared to rely almost entirely on the opinion of the Health and Safety Manager to judge whether it was meeting its own objectives and standards for health and safety.

Inspection and hazard identification were reported to be 'patchy' in interviews. A new system was in the process of being introduced by the group health and safety manager, in which regular monthly inspections of each area were to take place involving the shift manager or supervisor, safety representative and the group health and safety officer. Some interviewees commented favourably on the application of this system but it had clearly not yet been experienced in all areas of the establishment.

Other routine means for identifying hazards included procedures for written reporting of hazards or accidents to the supervisors or shift manager. The shift manager was required to document the steps taken to prevent a recurrence. The forms then passed to the works director and the group health and safety manager, to follow up. Supervisors and managers interviewed thought the system worked. It appeared however that the forms were not freely available. A new system of defect reporting had been introduced, as part of lean manufacturing. It used a series of five different coloured cards for different problems. Supervisors carried out an inspection of their line before they started up and complete daily line safety checks. Some plant and machinery were subject to specific inspection routines such as the fork-lift trucks which required a daily ten-minute inspection by designated staff. Investigation of accidents and ill health was carried out by the group health and safety manager.

Although the aim of the group health and safety manager was to delegate responsibility for carrying out risk assessments to supervisors this did not appear to be widespread. They were mainly undertaken by departmental or shift managers who had received training to do so from the

group health and safety manager. The group health and safety manager held the written records of risk assessments, but they did not appear to be complete for all the tasks carried out on site.

In *case study 5* written risk assessments were undertaken along with assessments under the COSHH Regulations. A variety of routine inspections were undertaken. They were risk based rather than general inspections and risks were scored. The system was about three-quarters complete. A senior manager and a safety representative normally undertook them. Simple checks on fire extinguishers, eye wash bottles and emergency showers were done by team managers. A process worker interviewed said he had raised issues with the shift manager, and they had been resolved. The five team leaders on each shift also carried out inspections every two weeks and a system of inspecting earthing etc with an operator and a fitter inspecting their area had been recently introduced.

Interviewees were generally of the opinion that the management of health and safety had improved greatly under the new managing director and his appointment of the current SHE manager. Systems were in place to enable workers to report hazards and incidents and to ensure that remedial action is undertaken. The number of such reports had increased in the recent past, a development that the SHE department interpreted positively arguing that it represented greater opportunities to intervene with preventive actions before injuries resulted from such reported hazards. The injury data for this case study appeared to support this view.

Interviewees generally felt that written procedures for health and safety were established and working relatively well although there was room for better documentation of what was being done. It was suggested that such improvement would occur if the company pursued its aim of working towards ISO 18001 in the future, in a way similar to that which it had already achieved in the environmental field, where it had ISO14001 as a management standard. Although auditing of health and safety management had previously been undertaken by the SHE manager, it had been decided that in the future it would be carried out by the company's internal auditors who already audited for ISO 14001 (environment) and ISO 9001 (quality).

The above review of how systematically health and safety was managed in the case studies throws up a pattern of difference that is consonant with other data. For example, workers were asked how effective they thought that managers were at managing health and safety conditions (Table 5.11). Responses to this question leave little doubt that workers rated case study 3 the most effective and case studies 1 and 4 the least so. It is perhaps no less surprising that this pattern repeats when workers' views are considered on how good managers are at dealing the health and safety problems that they or their fellow workers may have. More than half the workers in case studies 2 and 5 and a still larger proportion in case study 3 thought their managers were good or very good in this respect. This contrasted with nearly three-quarters of the respondents in case study 1 and nearly two thirds of those from case study 4 who did not think their managers either good or very good at such matters (Table 5.12). The findings paralleled the health and safety performance of the case studies. Case study 1 consistently scored poorly and case study 3 consistently scored best on all these measures. Again, in parallel with the previous measures of health and safety performance, although not so pronounced, of the remaining three case studies, generally 2 and 5 showed higher ratings than case study 4.

Table 5.11 Workers' assessment of how effective the employer is at managing health and safety conditions

<i>Percentages</i>					
<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Very effective	4	13	26	8	20
Reasonably effective	58	78	66	72	70
Not effective	31	9	5	16	9
Don't know	6	0	3	5	1

Table 5.12 Workers' assessment of how good managers are at dealing with health and safety problems that you or others may have

<i>Percentages</i>					
<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Very good	2	9	11	4	7
Good	25	50	53	35	43
Neither good nor bad	21	18	22	31	37
Poor	33	14	7	17	7
Very poor	13	5	2	5	2
Don't know	6	5	5	8	2

There was a correlation between employees' perceptions of general arrangements for management and those for health and safety management as is shown in Figure 5.5.

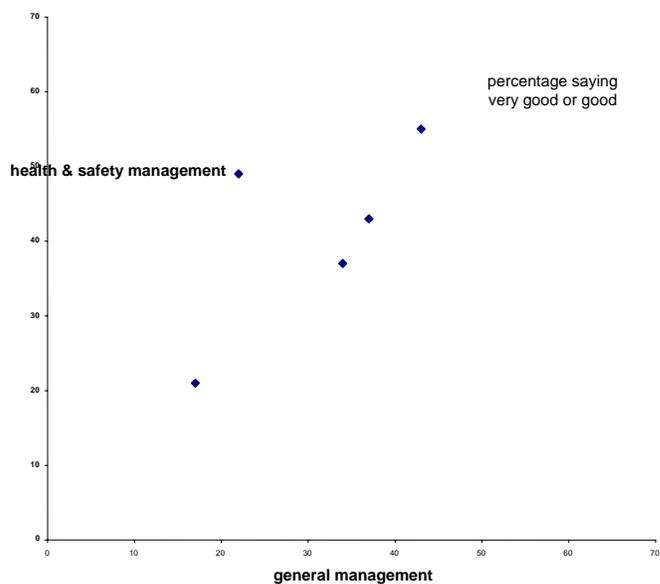


Figure 5. 5 Employee evaluation of health and safety management and general management

Respondents were asked a series of further questions about specific management arrangements on health and safety, including whether management:

- produced a written health and safety policy
- conducted risk assessments
- kept written records of risk assessments
- had procedures for monitoring workers' health.

Management in all the establishments claimed to do all four of these things. But when workers were asked about them there was a broadly similar pattern of response to these questions to that reported above. That is, the large majority of respondents from case studies 2, 3 and 5 consistently indicated knowledge of the existence of such management arrangements, with the highest proportion of workers demonstrating such awareness being found in case study 3. This contrasted with sometimes substantial levels of ignorance about the existence of such arrangements in case studies 1 and 4 (Table 5.13).

Table 5.13 Workers' knowledge of specific employer provision

<i>Per cent claiming to know such provision exists in each case study</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Written health and safety policy	73	91	92	83	95
Risk assessment	63	96	97	69	98
Written record of risk assessments	59	91	90	69	96
Procedures for reporting work related accidents and ill health	71	96	97	89	98
Procedures for monitoring workers' health	26	91	83	42	99

Similarly, when asked how frequently managers asked them for their views on health and safety at work, three-quarters or more of respondents in case studies 2, 3 and 5 felt they were at least sometimes asked for their views, whereas over half the respondents in case study 1 claimed that they were hardly ever or never asked for their views and so did a third of those in case study 4 (Table 5.14).

Table 5.14 Frequency with which workers report that they or others were consulted by managers for their views on health and safety

<i>Percentages</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
frequently	11	22	26	24	34
sometimes	39	70	51	42	40
hardly ever	24	9	15	17	9

never	26	0	8	17	18
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5.4.3 Representation and consultation

Combination of the quantitative results from the analysis of the questionnaire with information obtained from interviews with managers, representatives and workers further confirmed a broadly consistent pattern across the five case studies in relation to arrangements for direct and representative consultation on the subject with workers.

In case study 3 in parallel with the generally well-developed health and safety management arrangements, there were quite comprehensive structures for worker representation and joint consultation. Health and safety representatives covered virtually all of the permanent workers within the establishment. They were well trained, generally able to obtain the time and facilities they required to function and seemed broadly satisfied with their situation. The workers they represented also seemed satisfied with the representation they received as was also evident from the results of the questionnaire presented in Table 5.15.

Table 5.15 Workers' assessment of effectiveness of health and safety representatives and committees

<i>Percentage rating 'effective' or 'reasonably effective'</i>	<i>Case Study</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Effectiveness of your health and safety representative at representing your interests	50	85	86	62	85
Effectiveness of your health and safety committee at representing your interests	48	87	85	65	85

Health and safety committees at establishment and local level appeared to operate in line with the guidance on joint health and safety committees that accompanies the SRSC Regulations 1977 except in case studies 1 and 2 and to the broad satisfaction of workers, their representatives and management (Table 5.15). At the same time, information on workers' concerns about their health and the physical hazards of their work environment combined with that on reported injuries, supported the conclusion that case study 3 was performing better than average in managing health and safety risks.

In contrast, the establishment represented by case study 1, despite having a requirement that health and safety should feature regularly at board level within the organisation, had a poorly developed health and safety management system. Senior managers at the establishment appeared to regard health and safety management as being about 'following procedures'. They had little understanding of the issues involved having received little in the way of training on health and safety. They relied almost entirely on the health and safety manager—who had been appointed following an HSE enforcement action—to take responsibility for organising health and safety at the establishment. The fact that the health and safety manager was based at a different site some distance away and made only fortnightly visits to the establishment did not help this dependency. Although there was trade union representation at the company and a health and safety representative appointed, the management culture at the establishment did nothing to encourage or support worker representation or consultation on health and safety matters. The safety committee for the establishment was not constituted according the SRSC Regulations nor did it operate according to the guidance that accompanies them and its very existence appeared to be

unknown to a substantial proportion of the workers who responded to the questionnaire. Trade union representatives said:

‘Our views are ignored by the health and safety manager and by management generally.’

‘There is little communication or involvement with management.’

‘There is no consultation.’

‘Management don’t consult over health and safety issues.’

There was little in the way of training on health and safety for workers and little evidence of meaningful direct consultation at the establishment, or even of provision of information on health and safety matters. One worker commented:

‘I think the company health and safety manager could spend a bit more time at this site, and speak to the workers on a one-to-one basis. After all, they are the people in the know!’

Interviewees and respondents frequently identified a simplistic and behaviourist approach on the part of the management to dealing with health and safety.

As noted previously in case study 1 there was a greater proportion of workers than any of the other case studies who were dissatisfied with their working conditions and who found work to be bad for their health, both generally and in several specific ways. A greater proportion also identified hazards to which they were exposed in the physical and organisational environment at their workplace. Case study 1 also performed least well in terms of reported injuries with a level considerably in excess of what might be expected from the sector average. All of this is highly suggestive of an association between poor management arrangements for health and safety, including poor provision for representation and consultation and the poor health and safety outcomes in this case study.

The remaining three case studies occupied somewhat less extreme positions in the spectrum of health and safety arrangements and health and safety conditions/performance. Generally however they illustrated the same pattern with case studies 2,3 and 5 performing better than case studies 1 and 4. We see that case study 4 performed less well than average in terms of health and safety outcomes and although on most indicators of management arrangements and perceptions of work and health it did not fare as badly as case study 1, respondents consistently rated it poorly. From the interviews with representatives, workers and managers in case study 4 it was clear that while arrangements for health and safety management were in place they relied heavily on the role of the health and safety manager. They were, as a consequence, said to be somewhat ‘patchy’ in their application and not entirely integrated into the general systems for managing work at the establishment. One respondent commented:

‘Health and safety issues have arisen without any positive action being taken. The culture has altered to become one of blame rather than addressing the problems that

we encounter. ...Health and safety could be greatly improved by a little more explanation and a little more action on the part of the management.'

Formal arrangements for representation and consultation were in place although insufficient health and safety representatives were appointed to provide complete coverage for all workers. Consultation between managers and health and safety representatives took place but was limited. Responses to the questionnaire made it clear that there was also limited communication on health and safety between management and workers more generally. There was a joint health and safety committee at the establishment and it appeared to be constituted in accordance with the SRSC Regulations. However, it functioned as a forum for a discussion of a wide range of issues including many every day ones. Many of these were the sort of issues that — according to the guidance on the role of joint health and safety committees, as well as research on determinants of their effectiveness — would have been better dealt with through other procedures, leaving the committee to play a more strategic role.

Of the two remaining case studies that along with Case study 3 were better than average current performers as measured by our indicators, case study 5 had clearly defined senior management responsibilities for health and safety and reasonably well developed arrangements in place for undertaking them. The incidence of reported injuries had improved in recent years to the extent that from performing considerably worse than the sector average up until a few years ago, it was now performing better than this average. Interviewees were aware of this improvement and attributed it at least in part to a new management culture instigated by a new managing director and the safety, health and environment manager he had appointed. Its present health and safety management arrangements were largely a result of these changes. It also had quite well developed structures for representation and consultation including quite good coverage by health and safety representatives and a structure of joint health and safety committees in place. The overall impression from the interviews and responses to the questionnaires was that case study 5 was in the process of changing its health and safety arrangements from ones that had led to its poor previous performance to the present arrangements that were contributing to its better performance. However, in this process the legacy of the older experience was still in evidence. For example, health and safety representatives complained that they did not receive sufficient facility time to be able to consult adequately with workers or amongst themselves:

'Trade union health and safety reps are not given time to do the health and safety duties that they should be doing, as they are working on plants due to workload. The company has come a long way with their health and safety policies and it would be a shame if they slipped back because of this'

This was something that was attributed to the layout and complexity of the site and systems of work as well as to recent staffing reductions, making it difficult for the representatives to leave their place of work, rather than their managers deliberately denying them the opportunity to do so. They also (and perhaps for the same reasons) did not participate in either risk assessment or formal health and safety inspections. Responses to the questionnaire on working conditions and health were also indicative of a workforce in which there were still serious concerns about the effects of work on health. They suggested a prevalence of health conditions perceived to be associated with work as well as significant concerns about hazards of the physical and organisational work environment.

The health and safety performance of the small establishment investigated in case study 2 was also better than average but the situation of this case study was somewhat anomalous.

Experiences here were less supportive of the existence of the relationships between formal health and safety arrangements, representation and consultation, and perceptions of work, health, hazards and performance demonstrated in all the other case studies. Generally, arrangements for representation and consultation in this establishment were poorly developed and not consistent with requirements of the SRSC Regulations. This had been exacerbated by the long-term absence of the person appointed as a safety representative and had resulted in a major limitation on consultation with the minority of process workers at the establishment. One trade union representative commented:

‘ Its not working without a named safety rep’

Training on health and safety was also limited, as was competent advice for management on health and safety. But respondents’ satisfaction with their working conditions, and the relationship between their work and their health generally was quite high, as was satisfaction with provision of information and consultation between management and workers on health and safety matters. Assessment of management arrangements for health and safety more generally was complicated by recent changes that had taken place in the ownership of the site. The establishment had previously occupied the entire site but now shared with a larger organisation. One consequence of this was uncertainty on the part of many interviewees about who was responsible for a number of health and safety matters for the site as a whole and the extent to which the remit of structures such as the health and safety committee remained site-wide or were restricted to the establishment. Nevertheless, there had been no reportable injuries recorded at the establishment for the past several years and respondents were relatively content with local arrangements for both health and safety management and consultation.

In many ways however, the good performance and comparative satisfaction with the arrangements for information and consultation in place in case study 2 are not surprising. Indeed it could be argued they are what might be expected in an establishment of this size with its particular workforce composition in which there was a high representation of technical, administrative and managerial staff. The education and skills as well as labour market position of this majority may have facilitated their ability to engage informally in direct participation in health and safety more meaningfully than would have been possible in a larger establishment or amongst less qualified staff. It may be recalled that a similar situation was observed in the Norwegian study of direct participation on health and safety that was discussed in Chapter 2 (Gustavsen and Hunnius, 1981). Furthermore the number of process workers amongst the respondents was insufficient to make meaningful comparisons between their experience and that of the majority of technical, administrative and managerial staff that made up the workforce at the establishment.

In conclusion, the five case studies demonstrated a positive relationship between a constellation of factors associated with systematic and consultative management of health and safety and better than average health and safety outcomes.

CHAPTER 6: THE CONSTRUCTION INDUSTRY

The industry was selected for several reasons. For many years it has been associated with a relatively poor health and safety performance, accounting for one in three of work-related deaths, one in three HSE prosecutions and one in two prohibition notices. This performance, as well as resulting from the many hazards of the industry, is widely regarded as the consequence of a number of underlying features of poor management arrangements for health and safety and a 'risk tolerant' attitude in the sector. In addition, the organisation of work in the industry undoubtedly presents many serious challenges to the implementation of contemporary prescriptions for systematic health and safety management. Temporary and multi-employer work sites, complex supply chain relationships and responsibilities in project commission design and completion, large numbers of casual and relatively low skilled workers and low levels of trade union organisation all contribute to these challenges. None of these factors are unknown to the industry or its regulators and achieving better health and safety management arrangements that take them into account has been their stated aim for many years.

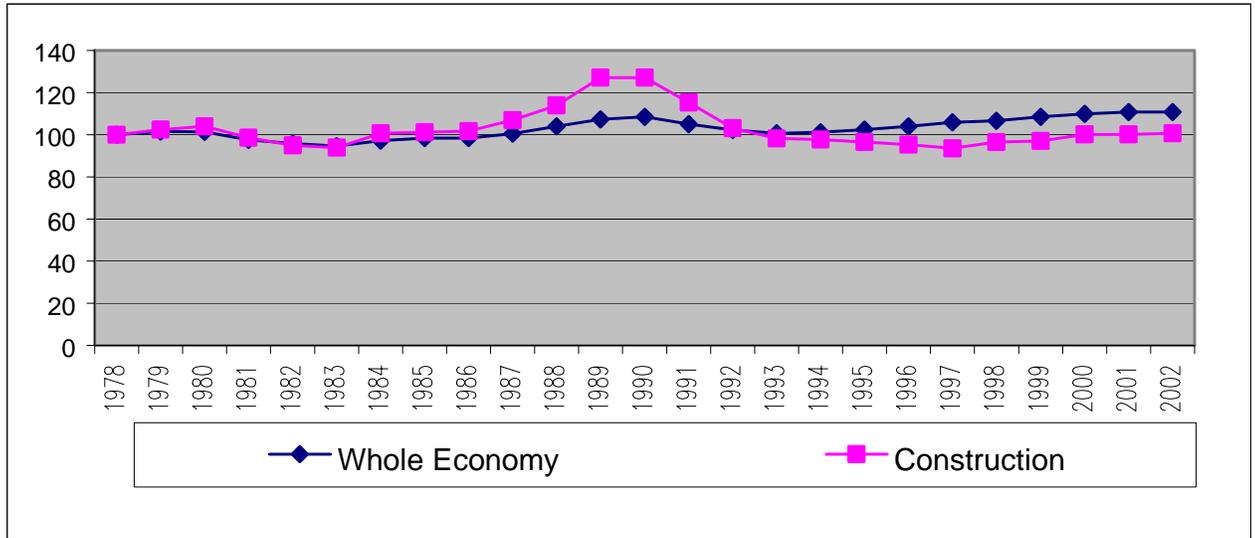
Our central interest in the case studies undertaken in the sector, as with those in chemicals, is the role of worker participation and particularly that of representative worker participation in the operation of such arrangements. In the construction industry, this means the examination of participatory approaches to risk management in an environment in which it is known that many of the supports for conventional approaches for representative worker participation are absent or underdeveloped. Recently, this absence of support for a more participatory approach has become one of the factors identified as responsible for the poor health and safety performance of the industry. As a result regulatory requirements found in the Construction, Design and Management Regulations 1994 now oblige principal contractors to ensure that employees and the self-employed are able to discuss and offer advice on health and safety. These measures are in addition to the rights that workers have to representation and consultation under the statutory requirements made in pursuit of Section 2 of the HSW Act 1974. We have selected five case studies, typical of a range of situations found in construction, to explore ways in which these provisions contribute to the achievement of participatory arrangements for health and safety in the sector, as well as the supports and constraints to which such arrangements are subject.

First, however, as we did with chemicals, we outline some general features of the sector with respect to industrial structure, economic performance, workforce composition, labour relations, hazards and health and safety outcomes.

6.1 THE INDUSTRY

6.1.1 General features

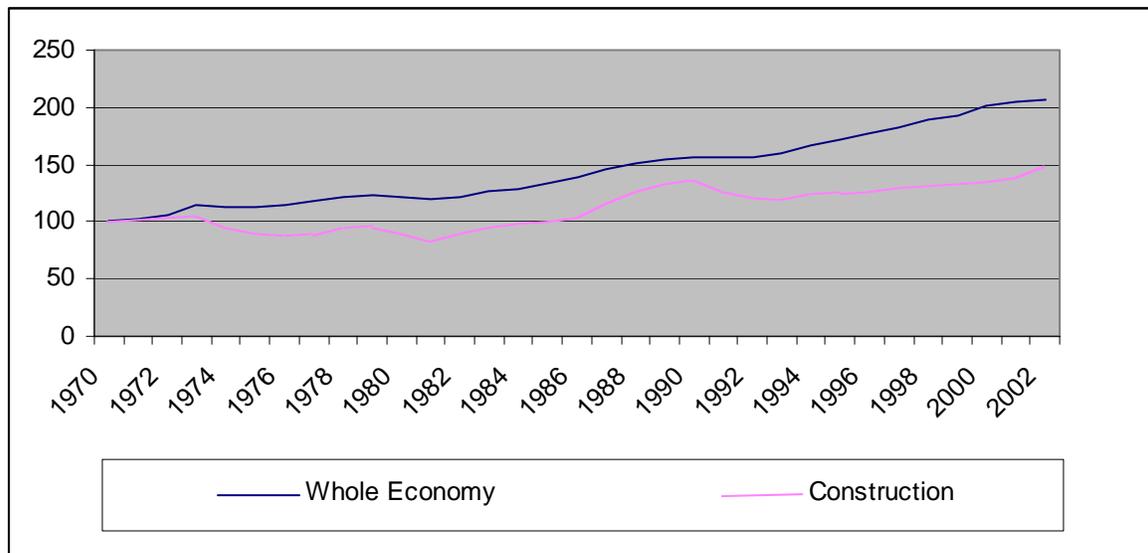
Between 1.5 to just under 2 million workers are employed across 168,000 firms in construction. As Figure 6.1 shows, employment in the sector has fluctuated with economic cycles but has more or less followed the pattern for the economy as a whole.



Source: Office of National Statistics

Fig. 6.1 Total employment (index, 1978 = 100): 1978-2002

Construction accounts for 6 per cent of the GDP, contributing £80 billion per year to the economy. Figure 6.2 shows the economic performance of the sector in recent decades in comparison with that of the economy as a whole.



Notes: All Values are based on 2000 Prices.

Sources: The Blue Book, Various Editions & Office for National Statistics

Fig. 6.2 Gross domestic production, index (2000 = 100): 1970-2002

Work in the sector varies enormously, with construction projects ranging from new building through maintenance of existing structures to demolition. The scale of such projects also varies

greatly from small-scale domestic work to major infrastructure projects that may take years to complete (NAO 2004:2).

Workers in the industry are engaged in a wide variety of trades and professions, with around one third of them allegedly self-employed, representing the highest proportion of self employed workers in any sector of the UK economy. In the occupational categories used by the Labour Force Survey (LFS) is the major occupational group in construction are 'craft and related occupations' with 56 per cent of operatives in this category, a far greater proportion than in chemicals (6 per cent). The standard classification of trade categories of operatives used by the Construction Industry Training Board (CITB) 1997, distinguishes 14 building trades such as carpenters and joiners, painters, plasterers and so on; other building trades, non-building trades and trades not specified. The HSE uses a slightly different classification for its injury data, nevertheless they are sufficiently comparable to allow the conclusion that the building trades account for 84 -90 per cent of all fatal injuries and 85 per cent of non-fatal injuries in the industry (ENTEC 2000).

The vast majority of construction workers are employed in the private sector (94 per cent) and some 14.4 per cent belonged to trades unions in 2000. As we saw in the previous chapter, in comparison with chemicals, average gross hourly earnings in the sector were lower than in chemicals but comparable with that for the UK as a whole, and on a par with manufacturing.

According to the LFS, in the year 2000, the workforce was distributed over a wide age range with a slightly greater proportion of younger workers (under 25) employed than in chemicals and manufacturing generally (LFS 2000). The majority (90 per cent) of workers are male, white, and in full-time employment. Nearly three-quarters were engaged in manual work (71 per cent). Of those in temporary employment nearly two thirds were engaged on fixed term contracts, while 10 per cent and 13 percent were agency workers and casual workers respectively. In Chapter 5 we showed that there is a lower proportion of workers with higher educational qualifications such as degrees or their equivalents in construction (7 per cent) than in chemicals (30 per cent). There is a relatively greater proportion with no qualifications (13 per cent in construction compared with 10 per cent in chemicals). LFS data indicates that 56 per cent of workers in construction have never been offered training by their employers, a considerably greater proportion than in chemicals (31 per cent). This is a little surprising since there has been a major emphasis on employer provision of training on health and safety in the industry in recent years. It may be that the effects of this were not yet apparent in LFS data for 2000. We also showed in Chapter 5 that in comparison with chemicals union membership in the sector is substantially lower.

6.1.2 Health and safety performance in the industry

Health and safety performance indicators in construction such as injury rates, fatalities and work related ill-health suffer from the same weaknesses of under-reporting, diagnosis and bias described for other sectors. Indeed, some of the features of the industry such as the high proportion of self-employed workers and the fragmentation of employment relationships and responsibilities in most construction sites, means that the extent of under-reporting of such measures of health and safety performance is known to be considerable. Despite such weaknesses in the data and limitations of interpretation, there is widespread agreement that all such indicators show that health and safety performance in the industry is a cause for concern. This is reflected in the injury and fatality data summarised in Table 6.1 and 6.2.

Table 6.1 Fatalities in construction

<i>Fatal Injuries to Workers in Construction: 1990/91-2003/04</i>															
		90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
Employee	N=	93	83	70	75	58	62	66	58	47	61	72	60	57	51
	Rate		8.4	7.8	8.9	6.9	7.7	8.0	5.7	4.4	5.5	6.5			
Self Employed	N=	27	16	26	16	25	17	24	22	18	20	34	20	14	19
	Rate		2.1	3.6	2.1	3.2	2.3	3.1	3.1	2.8	3.2	5.0			
All Workers	N=	120	99	96	91	83	79	90	80	65	81	106	80	71	70
	Rate		4.8	4.7	4.6	4.2	4.0	4.7	4.1	3.2	4.0	5.3	4.4	4.0	3.5

Notes: Reported to all enforcing authorities. Rate per 100,000.

Sources: HSC 1990/91 Table 1; HSC 1995/96, Table 2 & 3; HSC 1996/97, Table 2 & 3; GSS, 2000/2001, Table 1.46 and Figure 1.8; HSC 2002/03, Table 2

Table 6.2 Non-fatal injuries in construction

<i>Non-Fatal Injuries to Workers in Construction: 1990/91-2002/03</i>														
		90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03
Employee Major	N=	2894	2570	2061	1806	1872	1806	3227	3860	4289	4386	4321	4055	4098
	Rate		260.0	229.6	214.3	222.7	224.2	403.0	382.3	402.7	395.9	380.9		
Over 3-Day	N=	16390	14931	11418	9346	9642	9607	8637	9756	9195	10159	9367	9100	8675
	Rate		1730	1350	1050			1078	966.3	863.4	917.0	829.2		
Self Employed	N=	936	729	684	768	755	671	827	466	367	363	408	540	682
	Rate		95.6	94.7	100.8	96.6	90.7	104.0	65.4	56.5	57.7	62.7		
Over 3-Day	N=	1539	1220	1306	1564	1532	1496	1029	509	381	345	429	595	608
	Rate		160.1	180.8	205.2	196.0	202.4	129.4	71.4	58.7	54.9	66.4		
All Workers	N=	3830	3299	2745	2574	2627	2477	4054	4326	4656	4749	4708	4595	4780
	Rate		159.9	134.3	130.1	132.9	125.4	254.0	251.2	271.6	273.5	265.1		
Over 3-Day	N=	17929	16151	12724	10910	11174	11101	9666	10265	9576	10504	9796	9695	9283
	Rate		783.0	622.9	551.4	565.4	562.0	605.7	596.0	558.6	604.9	551.7		

Notes: Reported to all enforcing authorities. Rate per 100,000. Non-Fatal (major and over-3-day) injury statistics from 1996/97 cannot be compared with earlier years because of the introduction of RIDDOR'95.

Sources: HSC 1990/91 Table 1; HSC 1991/92, Table 1; HSC 1993/94, Table 1; GSS, 1994/95, Table 4; GSS 1995/96, Table 1.1(b); GSS 2000/01, Table 1.48; HSC 2002/03 Table 3, 4, 5 & 6; HSC 1994/95 Figure 9

For both fatality rates and rates for major injuries, the performance of the construction industry is considerably worse than that of most other sectors of industry. Even where the rates are higher than in construction, as in fatalities in agriculture for example, the number of workers employed in construction means that the overall toll of death is greater in the industry than it is in agriculture. While the rate of fatalities has decreased slightly since the introduction of the Construction Design and Management Regulations in 1995, this trend commenced before their introduction, the decrease is far from substantial and indicators suggest that it in recent years it has slowed or even reversed.

As may be anticipated, occupational health performance is more difficult to measure. However, according to the National Audit Office (NAO) there is a greater prevalence of musculoskeletal disorders (with 88,000 workers affected) than in most other industries. Rates of asbestosis and mesothelioma are relatively high and the industry also suffers twice the national rate of noise induced hearing loss (NAO 2004). Self reported work related illness surveys estimate 137,000 people whose current or most recent job was in construction suffered from an illness they reckoned to be caused or made worse by their job resulting in the loss of an estimated 2.8 million working days. As with injuries and fatalities this data has presented a strong message to government, regulators and the industry, that there is considerable cause for concern about health and safety in the industry.

The HSC's Revitalising Health and Safety Strategy (HSC 2000) set out national performance targets and the aims and actions thought necessary to meet them. It encouraged various industries to set their own targets in keeping with those for industry as a whole. The Construction Industry Advisory Committee (CONIAC) subsequently announced it would seek to achieve considerably more ambitious targets:

- 40 per cent cut in the rate of fatal and major injuries by 2004/05 and 66 percent by 2009/10 (the *Revitalising* targets were 5 per cent and 10 per cent respectively)
- 20 per cent cut in the rate of cases of work-related ill health by 2004/05 and 50 percent by 2009/10 (compared with 10 per cent and 20 per cent in *Revitalising*)
- 20 per cent cut in the rate per 100, 000 construction workers of working days lost from work-related injury and ill health by 2004/05 and 50 per cent by 2009/10 (15 per cent and 30 percent are the targets set in *Revitalising*)

However, current evidence suggests that the industry has so far failed to meet these targets. The NAO report (2004) for example, notes that in January 2003, HSE reported that the incidence rate of fatal and major injuries had fallen by 12 per cent in comparison with its baseline, rather than the 40 per cent sought by 2004/5. The most recent figures for self reported ill-health in construction are not sufficiently current to allow estimation of progress against the interim targets for 2004, but they suggest the industry has some way to go before meeting these targets (NAO 2004).

The available evidence on health and safety performance therefore describes an industry for which, despite its economic success, there are serious concerns about the toll of damage inflicted on its workforce. In the following section we outline some of the main ways in which regulators and the industry have attempted to address such concerns in recent years and how improving participatory arrangements have become a major focus for such efforts.

6.1.3 Health and safety arrangements in the industry

Supplementing the general requirements the HSW Act 1974, and the measures of the MHSW Regulations, the provisions on worker consultation and representation in the SRSC Regulations 1977, and the H&S(CwE) Regulations 1996, are specific regulations applying to health and safety in the industry. The significant recent milestone in these latter arrangements was the Construction Design and Management Regulations 1994.³⁸ These regulations were originally conceived, partly to implement the EC Temporary or Mobile Construction Sites Directive, and partly as a response to poor health and safety performance in the sector. They were accompanied by an Approved Code of Practice (revised in 2001) and considerable guidance on their implementation has been published since their introduction in 1995. They are important for health and safety management in the construction industry and especially for the role of worker consultation.

Amongst the reasons that research and regulatory policy had identified as responsible for inadequate health and safety performance in the industry were poor communication between the various economic actors involved in construction work and the absence of clarity, definition and connection in their health and safety responsibilities.³⁹ The CDM regulations were introduced to address these problems. They focused on communication and control of health and safety on construction sites and imposed explicit duties to manage the risks of construction work, not only on employers, but on the range of actors engaged in any construction project from its inception to its completion. In so doing, they created legal obligations for prevention across the complex work environment and economic relationships in which construction projects were undertaken and a continuity of the duty of care amongst other duty-holders involved such as designers⁴⁰ and clients.

Recognition of the complexity of management arrangements for health and safety inherent in construction work led to explicit requirements in the CDM regulations for:

- the appointment of a planning supervisor;
- provision of information to the planning supervisor; and
- the production of a health and safety plan and a health and safety file.

All these measures were intended to enable the kind of risk management regimes required by the Framework Directive 89/391 (implemented in the UK by the MHSW Regulations) to operate as effectively in construction work as in the more conventional workplaces of other industrial sectors. To ensure this was so, in addition to the obligations placed on new duty holders in construction, the regulations also placed strong emphasis on requirements for competency and for the engagement of workers in more participative approaches to health and safety. Measures in the regulations required the principal contractor appointed for any construction project, so far as reasonably practicable, to ensure co-operation amongst all contractors on site, to ensure that only authorised persons were allowed on-site and provide information and training for all contractors and their employees. They were further required to ensure that employees and the self-employed

³⁸ Revised CDM regulations are anticipated in the coming year. However, as the present research was conducted on sites in which to which the existing CDM regulations applied we have concentrated on these and not attempted to discuss their proposed revision.

³⁹ Dawson et al 1988 draw attention to many of the issues taken up in the regulations, as did several subsequent studies. Whittington et al 1992, for example, in a research report on management and organisational factors that was commissioned by the HSE identified problems of communication, training, competence, accountability and co-ordination that limited the effectiveness of OHS management. They proposed solutions to these problems, including greater involvement of supply chain actors and processes, similar to those subsequently introduced by the regulations.

⁴⁰ The term includes architects, architectural technicians, structural engineers, temporary works designers, specialist contractors and manufacturers.

were able to discuss and offer advice on matters that could be reasonably foreseen to affect their health and safety and that there were arrangements to co-ordinate such views of workers or their representatives. The regulations placed further requirements on all contractors to co-operate with the principal contractor in these matters.

The response of the industry to these requirements gathered momentum during the 1990s, stimulated by influential reports critical of its health and safety performance,⁴¹ as well as by HSC campaigns such as ‘Working Well Together,’ launched in 1999, and more generally by initiatives from CONIAC. Key issues addressed in the regulations, such as those of the influence of the supply chain and the role of designers and clients in building health and safety into construction work are repeatedly referred to in all of these reports and campaigns. More directly relevant to the present research however, is their reference to the need for improved health and safety awareness, communication and competence in the relations between principal contractors, their sub-contractors and their workers during construction work, in keeping with the measures of the CDM Regulations. There is evidence that such continued exhortation has impacted on the policies of larger construction companies. As a result, they appear to have made increasing provision to demonstrate their executive management commitment to health and safety, their use of specialist advice and their arrangements to improve health and safety awareness. They further demonstrate adoption of OHS management systems and efforts to improve communication between contractors and workers at construction sites (Robertson *et al* 1999, Entec 2001, BOMEL 2004).

As a result, the regulations are considered by the HSE to have had some impact in improving health and safety outcomes in the industry. It claims that studies it has commissioned suggest⁴² (HSC 2003a):

‘. . . that proper implementation of CDM results in generally improved project management which results in lower rates of injury, improved quality and deliverability as well as significant savings’

Performance in the industry and ways of improving it has nevertheless continued to be a prominent subject in debates on health and safety strategy in the years since the introduction of the regulations. In keeping with its preference for non-regulatory approaches generally, HSC strategies to promote improvement in the industry in recent years have essentially concentrated on non-regulatory ways of enhancing the approach of the CDM regulations. At the industry level, procurement, the supply chain, cultural change and the responsibility of senior management have featured prominently. Characterising developments at the level of the workplace have been concepts of industry culture, health and safety awareness, competence and the need for attitude change.

⁴¹ For example, there was a report from the National Audit Office on the HSE’s work in construction in 1994. Also in 1994 the Latham Report on procurement and contractual arrangements in the industry was published with specific reference to health and safety (Latham 1994). In 1998 an influential report to the Deputy Prime Minister from a Task Force chaired by Sir James Egan (Egan 1998) made substantial criticisms of the inadequacy of the industry’s response to the problem of health and safety performance.

⁴² Nevertheless, the regulations themselves are seen as having a number of substantial weaknesses. For example, the 300 responses to a HSE Discussion Document (HSE 2002) on the future of health and safety in the industry while generally supportive of their principles, were also concerned with their complexity and tendency to encourage bureaucratic responses from the industry. The revisions to the ACoP planned as a result were intended to address these problems and discussion of revision of the regulations themselves has mainly focused on means to simplify and strengthen them (HSC/CONIAC 2003a).

Notable in the non-regulatory approaches to improving performance in the sector is the extent to which involvement of the key players has been pursued and in the ways the approaches address improving health and safety management arrangements identified in the CDM regulations. For example, the Working Well Together campaign was a major effort to persuade the industry to commit itself to action in the three relevant areas of competence, communication and co-operation. It involved the groups representing the main economic interests in the construction supply chain drawing up action plans on how they intended to achieve improvements in these areas. By the end of 1999, according to the HSE, findings of research it had commissioned showed⁴³:

‘The campaign’s core messages — to change the culture surrounding health and safety; to encourage workers to be more health and safety conscious and to prompt employers to take a more proactive health and safety stance — are hitting their key targets’

The notion of the necessity of a culture change is therefore deeply embedded amongst many of the larger organisations in the industry, as well as in the pronouncements of its regulators. The same theme is strongly evident in the research on health and safety management in construction commissioned and published by HSE. Greater involvement of workers in health and safety arrangements is prominent in approaches to achieving this culture change.

In 2000/01, ten of the groups representing key interests in the construction industry supply chain⁴⁴, developed their own action plans in response to the Working Well Together Campaign. They addressed issues that included dealing with improving communication on health and safety matters with workers. Several, including the Construction Industry Employers’ group, and the Construction Liaison Group identified lack of worker involvement and consultation as a major issue on which their action plans would focus (Fidderman, 2004:14). In 2002 CONIAC established a working party to produce a note on best practice on worker consultation (HSC/CONIAC 2003b). It recommended that employers should adopt strategies and structures that actively engage in two-way communication with the workforce, and workers and their representatives should have a proactive role in consultation. It also recommended the development of Key Performance Indicators to enable monitoring and evaluation of workforce engagement.

However the means to achieve such involvement remains somewhat constrained by the experience of employment relations within the sector and the managerialism that dominates its culture. Low trade union density along with the temporary nature of work (and workers) in the industry means that infrastructures for worker representation such as is possible under the SRSC Regulations in many sectors, is far more problematic to achieve at workplaces in the construction industry. Moreover hostility of employers towards trade unions and their representatives and the many instances of victimisation of workers who have attempted to act as trade union representatives are further powerful disincentives to representative participation in the sector. Faced with such challenges, trade unions organising generally in the sector have often resorted to providing support for their members through a greater role for their full-time regional organisers rather than placing too much reliance on the establishment of workplace representatives. As worker participation in health and safety has become increasingly more prominent, it is probable that it has also formed an increasing aspect of the role of such organisers.

⁴³ see HSB 293:5 for details

⁴⁴ Including the Construction Industry Board, Construction Industry Council, Construction Industry Employers’ Council, Construction Industry Training Board, Construction Products Association, Constructors’ Liaison Group, Major Contractors’ Group and the TUC.

At industry level there appears to be an effort to endorse a range of forms of worker participation in health and safety in which representative participation according to the legal requirements of the SRSC Regulations (or indeed of the H&S(CwE) Regulations) is but one of a number of options. They include for example generic approaches towards achieving better communication of health and safety messages to workers both individually and in groups, through for example, consultation over risk assessment, work method statements and toolbox talks. The obstacles to effective communication on health and safety between the principal contractor and employees of sub-contractors are acknowledged. Various strategies to address these difficulties have been proposed. Amongst them are holding sub-contractors accountable for communication on health and safety with their workers and encouragement of direct communication between all workers and representatives of the principal contractor during the induction of new workers. Setting up formal structures for communication between representatives of the principal contractor and the workers of sub-contractors through such things as project health and safety forums is a further means of institutionalising communication across barriers presented by different employment relationships.

Direct communication between workers and managers and their health and safety advisors is encouraged. Frequent inspection of health and safety on sites, and openness of managers to direct discussion of health and safety concerns with workers, are widely canvassed as means with which managers can raise awareness of health and safety and increase participation. Alongside such routines, assurances of the anonymity of workers who report hazards are provided as well as 'hot-lines' to health and safety advisors, as further means to encourage workers to engage with health and safety issues and allay fears of the possible negative repercussions for raising such issues. Training provision on health and safety appears to be regarded as a means of promoting worker participation. This is partly because of the opportunities it allows for the imparting of information on the subject from managers and workers, but also because of the opportunities it offers workers to communicate their concerns during the delivery of such training.

In terms of structures for representative participation, the legal requirements of the SRSC regulations are endorsed at industry level. There has also been collaboration between some employers' organisations and the trade unions in the sector on the voluntary introduction of Worker Safety Advisers. These schemes authorise selected trade union health and safety representatives to visit the sites of member employers to represent the health and safety interests of workers. In so doing they also provide advice on health and safety to employers and workers jointly. However such schemes are limited in their coverage and enthusiasm for them is not shared by all of the major employers' organisations in the sector.

Other means of engaging workers in a representative or quasi-representative fashion supported at the industry level include the appointment by managers of individual workers to act in this capacity. However, the extent to which such individuals can be regarded as workers' representatives is limited by the way in which they have been appointed and how their fellow workers perceive them.

Therefore it is noticeable in industry level discussions of the development of these arrangements, that although worker participation is clearly promoted as a means to enhance changes of awareness of health and safety in the industry, it is a special form of such participation that is mainly encouraged. In this, a managerialist conceptual framework of the work environment is dominant. It is clear from the focus on information dissemination shared by many of the participatory initiatives promoted, that they are regarded as means in which a top-down perspective on health and safety can be disseminated to workers. Workers communicating their concerns and their expertise on health and safety to their management, while theoretically

possible through such arrangements, receives scant attention and evidently occupies a considerably lower profile than that of the usefulness of the arrangements for relating managers' views to workers.

The rolling together of requirements that workers should be consulted on health and safety with those that require them to be inducted, trained and competent, again frames consultation with workers on health and safety within a managerialist conceptualisation of 'participation' on health and safety. In particular an effort seems to have been made to divest participative arrangements of any connotation of conflicts of interest between workers and their employers over health and safety, or support for the autonomy of workers' interests. In this respect it is notable that the CONIAC working party set up to produce guidance on best practice for worker consultation, lists less lost time and insurance, better training and worker qualifications and better industry commitment to change as amongst the main drivers for such practice. Even the trade unions engaged in discussion and development of these arrangements at industry level tend to endorse their emphasis on voluntarism, partnership and the economic needs of the management of the industry in order to advance the case for improved health and safety performance.

Given the features of employment relations and the organisation of work in the industry, such characteristics of the arrangements for workers' participation in health and safety no doubt reflect the pragmatism of the regulatory authorities and the trade unions to achieving only what is possible within such constraints. It would seem important nevertheless, to determine the extent to which they can deliver a meaningful representation of workers interests in health and safety and the extent to which they are constrained or supported by the features outlined above. The diversity of the structure and organisation of work in the industry and the huge number of small enterprises involved, are acknowledged as posing severe challenges to effective arrangements for health and safety generally. This is likely to be especially true for participative arrangements across such a diverse range of organisations is likely to be extremely variable. Whether the largely voluntary approaches to participative arrangements introduced in the industry in response to the CDM Regulations are sufficiently robust to impact across this diversity is important to ascertain, as is whether the top-down approaches to worker consultation in the industry are appropriate or effective means of promoting the engagement of workers. The five case studies discussed in the remainder of this chapter were undertaken to help answer these questions.

6.2 THE CASE STUDIES

The complexity of the way work is organised and undertaken in the construction industry was reflected in the case studies chosen. They included large and small companies, as well as worksites of different sizes. Two case studies (4 and 5) were based at major metropolitan construction projects with the range of hazards and complexity of work organisation that might be anticipated from the construction of large multi-story commercial property. Another case study firm (case study 3) was mainly involved in water and sewerage construction and maintenance, while the other two case studies (1 and 2) were based on firms undertaking a range of building work for both private and public sector clients. Most of the companies were main contractors while one was a sub-contractor. In all cases the case study company was only one of a number of employing organisations working at the same time on the same site. The nature of the employment relationships varied on the sites investigated, involving relations between main employers and their permanent employees, sub-contractors and subcontractor employees as well as other workers such as the self-employed and agency workers. In all cases trade union presence was limited or altogether absent and representative arrangements ranged from situations in which worker representation on health and safety was undertaken on a full-time basis to those in which

there was no form of representation present. The structure and organisation of employment in the five case studies is shown in Table 6.3.

Table 6.3 Work structure and organisation in the case studies in construction

<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Percentages</i>					
Male	94	98	99	100	100
Ethnic minority	0	8	5	23	24
Age					
16-24	12.8	10.1	15.1	10.6	16.2
25-34	28.5	24.3	26.2	34.7	45.2
35-44	30.1	22.2	25.9	25.2	35.6
45-64	28.2	42.6	30.7	27.8	3.2
65+	0.6	0	1.5	1.3	0
Full time	96	94	91	97	96
Permanent	84	100	80	96	91
Manual	60	45	76	77	57
Length of service					
1 year or less	40	25	69	15	59
2-5 yr	30	35	18	51	28
6-10 yr	5	21	2	9	7
>10 yr	25	19	11	24	7
Employer					
Main employer	33	82	48	23	6
Contractor	60	18	32	72	94
Agency	5	0	21	4	0

6.2.1 Workers views on their working environment

We set out to understand the role of representation and consultation across a range of workplaces and work arrangements that were fairly typical for the sector. Unlike the chemicals sector, where fixed establishments employing the large majority of their workers on permanent full-time contracts enabled the collection and comparison of reported injury data between case studies, the situations investigated in construction included far more complex employment relationships. These complexities and the temporary nature of the workplaces meant that data on reported injuries could not be used in conjunction with other more subjective measures, to support direct comparison of health and safety outcomes between case studies as we did in chemicals. Indeed, such data was not always available on a site by site basis, nor if it were, was it possible to relate it in any meaningful way to data available at company or national level. Instead we have chosen case studies that are believed to be fairly typical of situations experienced in the industry generally. We have also chosen them to demonstrate situations in which a range of health and safety management arrangements were in operation and in which representation, consultation and the participation of workers in health and safety matters played a part to varying extents. We have

assumed that the case studies are representative of employers and their managers who are fairly positive about their approaches to health and safety.

The overall responses to questions on the extent to which workers found their work environment and work organisation to contribute to poor health outcomes as well on the type of physical and psychosocial hazards they faced, provides an impression of how health and safety is experienced in the various workplaces studied.

Tables 6.4 to 6.6 show that although the majority of the manual workers in each case study were satisfied with their working conditions, at the same time, one half to two thirds thought that their work was bad for their health. In most case studies the majority also thought their health and safety was at risk⁴⁵. This seems to suggest a measure of resignation about the consequences of work for health and safety amongst the manual workers in the case studies.

Table 6.4 On the whole how do you feel about your working conditions?

<i>Per cent manuals</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
	<i>N=102</i>	<i>N=22</i>	<i>N=47</i>	<i>N=23</i>	<i>N=46</i>
Very satisfied	25	9	26	14	20
Fairly satisfied	62	68	69	59	59
Not very satisfied	13	18	0	27	20
Not at all satisfied	0	5	5	0	2

Table 6.5 Do you think that your work is bad for your health?

<i>Per cent manuals</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
yes	63	55	41	68	56

Table 6.6 Do you think that your health is at risk because of your work?

<i>Per cent manuals</i>	<i>Case study 11</i>	<i>Case study 12</i>	<i>Case study 13</i>	<i>Case study 14</i>	<i>Case study 15</i>
yes	71	55	39	68	50

Amongst respondents who thought their work was bad for their health the most frequently mentioned conditions they associated with their work were muscular problems of the shoulder, neck or back; muscular problems of the arms, legs and feet; hearing problems; skin problems and stress. Headaches and overall fatigue also featured frequently as work associated complaints amongst respondents in some case studies. Around half or more of manual workers in four of the five case studies suffered from musculo-skeletal disorders of the neck, shoulder, back or limbs. In the remaining case study (case study 1), these conditions were not suffered by quite such a large proportion of respondents who had said their work was bad for their health. Nevertheless they

⁴⁵ Only in case study 3 were there fewer than half the manual workers who thought their work bad for their health and their health and safety to be at risk.

were still the most commonly suffered complaints (44 per cent of respondents had experienced muscular problems in neck, shoulders, and back and 33 per cent in arms legs hands or feet).

The physical and organisational aspects of the work environment to which respondents were exposed for more than half their working time also show some common experiences. For example, the physical hazards to which the largest proportion of manual workers in each case study reported being exposed for more than half their time at their workplaces were noise or vibration, poor lighting, working at heights, extremes of temperature and chemical fumes and dusts. Aspects of work organisation and job design that the largest proportion of respondents in each case study experienced included repetitive work, carrying or moving heavy loads and time pressures on their work. Although not as common, experience of unsympathetic managers and over-work also featured frequently amongst quite a large proportion of manual workers in most of the case studies.

Respondents' answers to questions on their experience of injury and ill-health provided some supplementary information. They were asked if they had had an accident at work in the last 12 months and if so whether they had reported it. The results are shown in Table 6.7 below. It is not clear what proportion (if any) of the accidents experienced by manual workers but not reported, were reportable under RIDDOR.

Table 6.7 Respondents' accident experience in the previous 12 months

<i>Case study</i>	<i>% manuals</i>	
	<i>Reported an accident</i>	<i>Had accident not reported</i>
1	14	10
2	27	14
3	20	17
4	4	13
5	30	15

These indicators of the health and safety experience of workers in the case studies add up to a general confirmation of the harsh working conditions known to exist in the construction industry. Although there were suggestions of differences between the case studies in the extent to which such conditions were perceived, in broad terms the majority of respondents in each sector identified the same kinds of physical and organisational aspects of their working conditions as injurious to their health and safety. However, these observations did not translate into greater concern about working conditions and it was noticeable that the majority of the construction workers in the sample regarded their working conditions as satisfactory.

6.3 MANAGEMENT, CONSULTATION AND HEALTH AND SAFETY IN CONSTRUCTION

We begin our examination of management and consultation with a consideration of the commitment to health and safety management in the companies studied, followed by some observations on the extent and systematicity of the arrangements for OHS management in the case studies. We then turn to the role of direct and representative worker participation in the

arrangements for health and safety and examine the evidence of the presence and operation of such arrangements in the case studies. We use the same general indicators of their presence and operation as we did in chemicals. Thus, we look at formal arrangements for representative participation; the provision and experience of direct consultation and the operation of arrangements to inform and train those workers and their representatives. However, employment experiences and relations in construction mean that the particular focus of our attention involves comparison of the nature of the experience of consultation between employees of principal contractors and those of sub-contractors and agencies.

6.3.1 Senior management commitment to improving health and safety

Senior management commitment was evident in the case studies in several ways. A commitment to improvement was a conspicuous aspect of the public image of the construction companies and was especially evident amongst the larger operators. Another manifestation of commitment was the identification of health and safety responsibilities at board level, which was the case in four of the five companies. A major influence on the public statement of commitment to OHS on the part of senior management in two of the case study organisations was their membership of the larger industry organisation, the Major Contractors' Group. The MCG had its own strategy on improving health laid out in its Charter and included aims to:

- reduce by 10% year on year incidence rate of all reportable accidents and incidents per 100,000 workers until 2010
- have a fully qualified workforce by the end of 2003
- implement a site specific induction process before anyone is allowed to work on site
- ensure that all workers will be consulted on health & safety matters in a three tier system based on project, work gang and individual workers
- hold best practice workshops on health & safety practices and set up a system to disseminate lessons learnt
- publish an annual report of members' collective safety performance.

However, as will be apparent later, on-site experiences demonstrated that senior management commitment to these aims did not necessarily result in anything like their comprehensive achievement.

A further manifestation of senior management commitment was evident in case studies in which managers had a pronounced appreciation of the potential of supply chain influences on their business if they did not make a conspicuous commitment to good health and safety practice. In case study 3, for example, the Board of Directors viewed health, safety and the environment as a commercial priority, because the major clients with whom they contracted work demanded evidence of sound health and safety performance, without which the company would be unable to win important contracts. Examples were given of two major clients, one of which had stipulated that contracts would be lost if health and safety standards did not improve; and another that would not use companies if they were ever prosecuted for health, safety or environment breaches.

6.3.2 The extent and systematicity of health and safety arrangements

Both the extent and the systematicity of management arrangements for health and safety varied considerably across the five case studies according to the size and experience of the companies concerned. Generally, the impression gained from interviews with managers at the various sites investigated and at the company offices of the firms that constituted the case studies was that

there were quite well developed formal arrangements for managing health and safety. They included health and safety policies, health and safety plans and health and safety files, as well as requirements on the written assessment of risks in work method statements, all in accordance with the statutory obligations on employers in the sector. Also, there was evidence of other arrangements for risk assessment, for health and safety inspection as well as for systems for monitoring, reporting and feedback. Provision of health and safety training and inclusion of health and safety issues in induction training were clearly regarded as important.

The role of health and safety practitioners seems to have been especially significant in the development of many of the approaches to health and safety management found in the case studies. Experiences recounted in the case studies suggested that the role of health and safety specialists in the industry may have grown considerably in the years since Dawson *et al* undertook their study. They reported limited incidence and effectiveness of qualified practitioners and examples of good practice confined to large firms (Dawson *et al* 1988). The current legislative position on risk management, derived from the provisions of the EU Framework Directive, requires that employers make arrangements to manage health and safety competently. The implementation of such responsibilities for competence in construction is also, as previously noted, a fundamental aspect of the requirements of the CDM Regulations. Although we did not set out to study the extent of this development, its effects were apparent in relation to the patterns of health and safety management we observed. The lead taken by individual health and safety specialists (in some cases in conjunction with trade union organisers as in case studies 4 and 5) in implementing the health and safety arrangements that we observed, including those for worker consultation, led to many instances of good practice. However, the dependence on the presence and role of individual health and safety practitioners for the introduction and operation of such arrangements may have been a factor that also gave rise to inconsistency in the systematicity with which these management arrangements were implemented in the absence of such individuals.

Indeed, despite such formal arrangements and declarations of commitment to health and safety at company level, our investigations suggested that systematicity, application and operation were neither comprehensive or complete. This becomes clear when the case studies are reviewed one by one.

In case study 1 for example, managers described a systematic approach to the management of health and safety at site level through defining responsibilities of the principal contractor managers, the qualifications and competence of sub-contractors and their workers and through monitoring and recording outcomes. But comments from workers suggested that these practices were perceived to be neither universal nor consistently applied. One said:

‘I was asked to take down some scaffolding. I said I hadn't got the ticket for scaffolding. They said "That doesn't matter. Do it anyway". I just walk away, but they're nasty to you after— you get all the shit jobs.’

Another commented:

‘I was asked to get a fork lift truck and move some stuff the other day. I said I couldn't — didn't have the right forks. They said “just do it”. I walked away. They said they'd get someone else to do it. Other people love it — just jump on the truck and move it. They don't know what the ground's like underneath or anything.’

In the same case study, sub contractors were expected to submit a method statement and a risk assessment to the company for each of their tasks before work started. The company regarded

these statements as key elements in the operation of health and safety arrangements. Its policy stated that if there was to be any significant deviation from the method statement, as submitted by the sub contractors, work should not commence until senior managers approved it. But groundworkers interviewed expressed the view that generally workers were not given sufficient information about the risks resulting from their jobs or the preventive measures and did not see method statements or risk assessments. One commented:

“They could improve communications with workers regarding risk assessments and method statements. There’s not enough information to enable you to do a job safely. Like underground cables — it shouldn’t be left to the ground worker to check for underground cables. It should be someone else, like a supervisor or engineer”.

There was therefore reason to doubt how systematic such procedures were. Even the company health safety and environment manager thought it unlikely such practices were always followed. He also commented that many sub contractors submitted generic method statements rather than site specific ones. Moreover, it was clear from interviews generally that many sub contractors, as well as local company managers saw method statements as a bureaucratic exercise rather than a plan to which the sub-contractors were expected to adhere. The site contracts manager commented:

‘Generally as a company we deal with safety issues quite efficiently I think. We take it very seriously. Constraints however sometimes make it very difficult to always achieve the standard we strive for. Financial constraints quite often mean subcontractors try to cut corners and have to be watched closely. Client tight time constraints and poor design regards ‘buildability’ also have an adverse effect. CDM is not always taken seriously by clients and design teams.’

In case study 2 managers complained that difficulties occurred when contractors that they employed then sub contracted the work to others. One commented:

“As a manager on a building site I am dealing with different work people daily and it is my considered opinion that there is a complete lack of training on H&S for the work people being employed on site. I am continually pointing out safety issues to men and young people all day long. No one should be allowed to work on site until they have had safety training. The problem is too many small sub-contractors are being used who in turn pick up anyone looking for work, many of whom have never worked on site and do not realise the dangers of building sites which change hourly let alone daily. Filling in endless forms will not stop people being hurt or killed.”

In case study 3, as in the previous two, the effort that had been made to achieve a systematic approach to health and safety arrangements at site level was evident in the descriptions of the scope and detail of their responsibilities presented by managers and their health and safety advisers. However there were also indications of the limited comprehensiveness and consistency of such arrangements, particularly in relation to the extent to which they successfully involved workers in health and safety.

Case studies 4 and 5 demonstrated a considerably developed approach to systematising their health and safety management arrangements. These arrangements were strongly influenced by advice from the senior specialist company management and appear to have embraced the involvement of the trade union. Also the large size and complexity of the construction developments that were the focus for the case studies were significant influences on recognising a

need for systematicity in health and safety arrangements at the sites. In case study 5, introduction of performance indicators appeared to be a further significant influence on the perceptions of the importance of health and safety arrangements in the attitudes of managers interviewed.

Some further insights into the operation of management arrangements were provided by the analysis of the questionnaire. Workers were asked how well informed they thought they were about risks at their workplace. In four of the case studies only around half of the manual workers (ranging from 46 per cent to 58 per cent) said they thought they were either very well or quite well informed.⁴⁶ Manual workers were further asked about their knowledge of several key aspects of the arrangements made for health and safety management at their workplaces, including if they knew whether management:

- produced a written health and safety policy
- conducted risk assessments
- had arrangements for reporting work- related accidents

Table 6.8 Manual workers' knowledge of health and safety arrangements

<i>Percentage with knowledge of management arrangements for OHS</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
Produces safety policy	77	86	81	65	84
Conducts risk assessment	76	77	87	61	87
Has procedures for recording accidents etc.	77	82	92	57	78

The results shown in Table 6.8 indicate that the majority of manual workers appeared to be aware that there were arrangements in place on the sites at which they worked through which health and safety could be managed. When asked how effective they thought this management was, three-quarters or more of the manual workers in four of the case studies indicated that they believed their management to be either quite effective or very effective at managing health and safety. In case study 2 two thirds considered it to be so.

At their face value, these latter findings suggest evidence of sound managerial arrangements for health and safety, about which the majority of workers were kept quite well informed. However, caution would be advised in interpreting them in this manner since this impression was in stark contrast with that obtained from interviews, which as outlined above suggested a considerable gap between the aims of health and safety management and the realities of both workers' and managers' operational experiences. Taking into account previous research into influencing health and safety behaviours in the construction industry, the most likely explanation for this discrepancy would seem to be general lack of awareness on the part of construction workers of the level and quality of information they are entitled to expect from their managers.⁴⁷ Such low expectations could be quite easily met and may at least in part have accounted for the generally high levels of apparent satisfaction with managerial arrangements expressed by respondents. At the same time the considerable amount of effort that has gone into improving at least the public

⁴⁶ In case study 3 nearly three-quarters of the manual workers thought themselves to be so.

⁴⁷ See for example, Entec, 2001; Robertson et al, 1999; Whittington et al 1992; as well as the earlier work of Dawson et al 1988

face of construction health and safety since the advent of the CDM regulations may also have had an impact on the perceptions of workers concerning management efforts. If such workers had attended induction training for example, or had glanced at trade literature for the industry, they would undoubtedly have heard about safety policies and arrangements for risk assessment and accident reporting. But in their everyday work, experiences of their operation might be quite different.

It also appeared from the interviews we had conducted that there was a substantial difference between the experiences of managers and workers of principal contractors and those of sub-contractors. This is particularly evident in the lower percentages of respondents who indicated awareness of health and safety arrangements in case study 4, which was a sub-contracting company. Our samples of respondents in all the other case studies included a mixture of both workers of principal contractors and those of sub-contractors. We were able to examine the effects of fragmented employment relationships by further analysing the above responses from manual workers to these questions according to the type of employment of the respondents. The results are shown in Table 6.9 below. It is clear that in almost every instance, employees of main contractors perceive themselves to be better informed on health and safety matters and have a higher regard for the activities of management in relation to health and safety than those who work for sub-contractors and agencies.

Table 6.9 Awareness of management OHS arrangements by employment of manual workers

<i>Percentage awareness of:</i>	<i>The main employer</i>	<i>A contractor or sub-contractor</i>	<i>Agency</i>
Produces safety policy	83	79	77
Conducts risk assessment	88	76	77
Has procedures for recording accidents etc.	91	74	82

A similar picture was found when the results for how well informed workers were about health and safety risks was analysed according to type of employment of manual workers. Two thirds of those who worked for the main employer regarded themselves as either very well informed or quite well informed about the risks of their workplace while around one half of those working for subcontractors or agencies did so.

To be sure that these differences in the sample were not merely artefacts of the influence of compositional effects overall, two of the case studies in which there were the largest representations of both employees of the main contractor and those of sub-contractors (case studies 1 and 3) were examined. The differences between the responses in the three categories of employment relationship were found to be consistent with the results for the sample overall. That is, employees of the main contractor in these two case studies were better informed about health and safety arrangements and health and safety risks than either subcontract or agency workers. They found their managers more effective at managing health and safety and had more training and experience of induction than did the employees of subcontractors or agency workers.

A similar picture emerged from an examination of workers' experience of training. Greater attention to the provision of training has been a major element of managerial approaches to achieving better health and safety outcomes in construction since the introduction of the CDM

Regulations in the mid-1990s. There are several aims apparent in this strategic approach.

One is improving the level of health and safety competence amongst both workers and their managers on construction sites through skills training and certification. Another is to ensure that risks are properly assessed and health and safety measures included in the design and communicated to workers before the operation of tasks (through method statements and method statement briefings for example). A generic aim implicit in these approaches is achievement of change in the safety culture of the industry and its workforce, with movement away from the norms of risk taking towards risk awareness and competent risk management.

Generally in the case studies, training was provided at a number of levels. In case studies 1 and 2, management training on health and safety appeared limited. Training courses such as the 5 day managers' courses offered by the Construction Industry Training Board (CITB) and the Institution of Occupational Safety and Health (IOSH) were regarded as the standard, and although they were recommended by SHE departments, many managers had not yet undertaken them. Similarly more specific training provided by the company in relation to particular sites, processes and hazards was said to be available but it had been little experienced by the managers interviewed. In case study 3, 4 and 5, the same provision was offered but uptake appeared greater. All supervisors and managers were said to have completed the CITB and IOSH approved courses on site safety management, followed by plant specific courses delivered by the safety department. Further training was also available on specific issues.

Other courses to which principal contractor and sub-contractor management referred to in interviews included training leading to CSCS and Construction Training Achievement (CTA) certification. This training involved health and safety aspects of construction tasks and was aimed at creating a better skilled and competent workforce. As already noted, in most of the case studies, principal contractors were attempting to ensure a competent workforce through requiring the certification of contractors' workers and there were targets such as those of the MCG that were intended to achieve this within a specified time frame. In addition to these requirements induction training was provided in many of the sites. Generally such training was quite brief. In many cases the main contractor providing the training required sub-contractor workers to sign to certify that they had received it.

In the large construction developments that were the site of the case studies 4 and 5, there were additional training arrangements. In case study 4 for example, partnership arrangements between the Principal Contractor, the trade union and a local FE College resulted in a Learning Centre at the Project. This drop in Centre offered computer courses developed by the TUC and accredited by the National Open College Network. The Principal Contractor in partnership with the trade union was seeking a CITB franchise to deliver a CSCS touch screen health and safety test. If the franchise were agreed, the trade union planned to deliver a one day health and safety induction for all workers at the Project and to prepare for CSCS testing. The Principal Contractor, and the trade union were also concerned about the difficulties of communicating on health and safety issues with workers who could not speak English. They had therefore organised English Language sessions, using some materials geared towards health and safety.

An indication of respondent's experience of health and safety training was provided by their answers to a question that asked how much health and safety training they had received in the previous 12 months (Table 6.10). This could be compared with the amount of training on matters other than health and safety that they had received during the same period. In both cases the opinion of respondents on how useful the training was also sought.

Table 6.10 Manual workers' experience of health and safety training (percentage)

<i>Quantity of training</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
None	37	64	26	57	37
Less than 1 day	15	18	17	17	18
1-4 days	32	18	44	22	30
5 to 9 days	10	0	4	4	5
10 or more days	6	0	9	4	11

It suggests that despite the efforts of companies to promote training, substantial proportions of respondents (ranging from nearly two thirds in case study 2 to one quarter in case study 5) had received no health and safety training. The proportion of manual workers with no experience of health and safety training was the same or greater than that for respondents overall in all of the case studies except one. Of those who had experienced health and safety training, its duration for the largest proportion had been between one and four days over the previous twelve months. It was perceived as useful by over 90 per cent of its recipients in four of the five case studies.

Although this suggests a less than complete experience of health and safety training amongst the respondents, as Table 6.11 shows, experience of training in this subject was greater than that for training on other matters. Over one third to three-quarters of respondents had received no other type of training in the previous twelve months. Again, the proportion of manual workers with no experience of training on other matters was the same or greater than that for the respondents overall in all cases except one. Again, of those who had experienced training, the vast majority had found it useful.

Table 6.11 Manual workers' experience of other training (percentage)

<i>Quantity of training</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
None	49	86	41	59	51
Less than 1 day	11	0	22	23	17
1-4 days	27	14	33	18	24
5 to 9 days	6	0	2	0	2
10 or more days	7	0	2	0	5

A further training provision that has a particularly high profile in the construction industry following the introduction of the CDM Regulations has been induction training for new workers and new entrants onto sites. Company policies to ensure that all workers had received some form of induction to the sites and processes for which companies were responsible were referred to extensively by managers in all of the case studies as central to their strategies for improving

health and safety. It was therefore anticipated that there would be widespread experience of this form of training amongst respondents. As Table 6.12 shows, in four of the case studies around four fifths of respondents had experienced such training. Of those who had this experience the majority had found it useful. However, in case study 2 nearly one half said that they had not received induction training. This was also the case study in which was found the lowest proportion of workers experiencing any form of training. It will be recalled that it was a comparatively small company with a relatively high proportion of sub-contract workers amongst the respondents. It is also interesting to note that in case study 5, one in five manual workers said they had not received induction training. This was despite the extensive efforts to ensure all workers had received such training, the involvement of the trade union convenor in this process and the theoretical prohibition of entry to the site without a certification of its completion (see below and the following section).

Table 6.12 Percentage manual workers' experience of induction training

<i>Experienced H&S induction training</i>	<i>Case study 1</i>	<i>Case study 2</i>	<i>Case study 3</i>	<i>Case study 4</i>	<i>Case study 5</i>
Yes	82	55	87	86	80
No	16	45	11	14	20
Don't know	2	0	2	0	0

Since training and induction is regarded as especially important in the effort to increase competence, communication and co-ordination between the different forms of employment on construction sites, we analysed our data for the sample overall in terms of the employment relationship of the manual worker respondents. As Table 6.13 shows, a considerably lower proportion of employees of the main contractor had received no health and safety or other training than employees of subcontractors and agency workers. They also perceived their training to be more useful than subcontract or agency workers with over half of them finding it very useful compared with just over one third of subcontract and agency workers.

Table 6.13 Percentage experience of training according to the employment relationship of manual workers

	<i>Employees of the main employer</i>	<i>Employees of sub-contractors</i>	<i>Agency workers</i>
No health and safety training	26	41	65
No other training	43	52	82
No health and safety induction training	18	18	18

In conclusion therefore, in keeping with previous research in this area, we found that while the complexity of the work organisation on construction sites pointed to the need for systematic health and safety arrangements it also created serious problems of communication between the various fragmented levels of responsibility on the sites. This led to an especially acute problem in terms of the communication of intended health and safety practices from their origin at the level of senior health and safety advisors to the persons implementing them at the level of individual workers and work teams. Despite the requirements of the CDM regulations, extensive

campaigning by the regulatory authorities and the publicly declared commitment of construction industry employers and senior managers, the case studies demonstrate that poor communication resulting from the complexity and fragmentation of employment relationships remains a vexing problem in the construction sector.

A further point about all these results is that they represent a commentary on the communication of information on health and safety matters from managers to workers. As we have discussed elsewhere, the communication of information is only one aspect of worker consultation on health and safety. But even if we restrict ourselves to a discussion of communication within consultation, the general understanding of the process involved implies it is a two way process, for as well as being about the flow of information to workers, it is also about dialogue between workers and their managers. It includes the response from workers to communication from managers as well as the communication of information, such as the identification of hazards, originating with workers to managers and their responses in turn. To explore the extent to which this occurred in the case studies requires an examination of the arrangements made for health and safety representation and consultation

6.3.3 Health and safety representation and consultation

In the sense with which it is prescribed by the SRSC regulations, health and safety representation and consultation with employees was only found in one case study (case study 5) where it operated in combination with arrangements for direct consultation. The other case studies demonstrated a range of different combinations of methods for employee consultation including:

- Non-unionised firms in which there were no formal structures or procedures for representative consultation, but there were formal and informal arrangements for direct consultation. (Case studies 1 and 2)
- Non-unionised sites in which there were arrangements for non-union representative consultation as well as those for direct consultation with workers. (Case study 3)
- Unionised sites where there was trade union engagement in representing workers' interests, including their health and safety but where no arrangements for the appointment of health and safety representatives had been made. (Case study 4)

Formal methods employed to achieve direct consultation with workers involved tool-box talks, method statement briefings and site induction training, while the informal methods were through direct communication with workers during site inspections and other less formal occasions in which managers came into contact with workers. We explored the extent to which the operation of these approaches equated to the legal meaning of consultation as discussed in Chapter 2 as well as the extent to which they could be regarded as effective means of promoting the participation of workers in health and safety matters.

On the three sites in which there were no trade unions and therefore no possibility of representation on health and safety in accordance with the SRSC Regulations, consultation with workers was by various direct means employed by managers. The practices used to achieve such consultation were inconsistent and had a number of weaknesses. Only rarely could workers' experience of them be said to equate to the meaning given to consultation by both its general legal definition and that of the CDM Regulations. The complex employment patterns in construction work meant that direct consultation in these situations, while never particularly well developed between workers and managers of the principal contractors, was much more poorly developed in relation to the workers of sub-contractors and agencies. This was because these workers were at the far end of the chain of communication between themselves and those with the

overall responsibility for health and safety at their workplaces. With each successive link in the chain there was less likelihood that elements of good practice adopted by the senior management of the principal contractor would be transferred across and within different employment relationships. This was often despite clear policy that supply chain leverage would be used on contractors to achieve better health and safety practices.

In case study 1, despite the absence of formalised arrangements for consultation, 21 per cent of the manual workers who responded to the questionnaire said they were frequently consulted on health and safety. 57 per cent said they had been consulted on safety policy, 54 per cent on risk assessment and 54 per cent on procedures for reporting accidents and ill-health. This was a substantially greater proportion of respondents than those who said they were frequently consulted on future plans for the workplace (10 per cent) changes to work practices (6 per cent) or staffing issues/redundancy (3 per cent) and pay (2 per cent). However, over one third of respondents (36 per cent) said they were hardly ever or never consulted on health and safety.

In case study 2, the proportion of respondents amongst the manual workers who said they were frequently consulted on health and safety (23 per cent) was higher than those consulted on other issues such as future plans for the workplace (0 per cent), staffing issues/redundancy (0 per cent) changes to work practices (0 per cent) and pay 5 per cent). 52 per cent said they were consulted on the safety policy, 43 per cent on risk assessment and 48 per cent on procedures for reporting accidents and ill-health. However, 59 per cent of manual worker respondents said they were hardly ever or never consulted on health and safety matters.

In case study 3, there were more developed systems for worker consultation than in the previous two case studies. A variety of approaches were in place for direct consultation offering considerable opportunities for consultation with workers on health and safety through safety briefings, toolbox talks, the development of methods statements, methods statement briefings, site inductions and so on. Over half the manual workers (57 per cent) said they were frequently asked for their views on health and safety. This was a substantially greater proportion than those who said they were frequently asked for their views on other aspects of their work such as pay (5 per cent), future plans for the workplace (7 per cent), redundancy (4 per cent) and changes to work practices (9 per cent). Substantial proportions also said they had been consulted on safety policy (62 per cent), risk assessment (60 per cent) and procedures for reporting accidents (81 per cent).

More interesting for the purposes of the present study in case study 3 were the arrangements for the appointment of so called 'safety champions.' This was the only example in the study of a system in which managers designated individual workers with a quasi-consultative role in health and safety. Appointment of individuals to this position on all sites was a recently defined company objective. The term was used in preference to worker 'representative' because the members of the company board were more comfortable with it. Other staff, however, commented that 'representative' would have been more appropriate. Managers regarded the role of safety champions as a means of improving the consultation and involvement of workers in health and safety matters. It was felt that currently the concept was foreign to most of the company's sites and it would take some time to become more accepted. No set duties had been laid down for safety champions, as it was anticipated they would differ according to the site. However, pressure had been placed upon site agents to ensure that safety champions existed on their site. It had resulted in agents approaching site supervisors or engineers to take on the role. The HS&E manager would have liked more operatives in such positions, but recognised difficulties in achieving this in the short term. Works managers and site agents said that they thought the role of the safety champion was to represent the views of the workers and act as a conduit, especially if workers wanted to retain anonymity. On the site visited the two safety champions present had

been appointed by the site agent and works manager. They believed their names had been put forward because of their experience.

They saw their role as ‘an extra pair of eyes and ears,’ a view of themselves that was also shared by the managers who had appointed them. They had attended a one-day awareness course for safety champions. They painted a positive picture of the company and the commitment of its management to improving health and safety. For example, referring to the ease with which workers could attend safety training and raise health and safety issues they said:

‘. . . they [the workers] would have no fear of raising health and safety problems with site management’.

‘. . . [workers’] views would be taken account of often before a job began’; and

‘. . . management were open to ideas’.

However, although they had been in place for several months, they did not feel that workers approached them to take up health and safety issues on their behalf. A further indication of the limited impact of safety champions was gained during the question and answer session that followed a safety-briefing meeting. It was apparent that many workers were unaware of the existence of a safety champion at this particular site and said they have never seen him. Of the few who had, one said that he had raised a particular issue with the safety champion. It seemed that the issue had been resolved but it was unclear to everyone, including the site agent, how this had occurred and what role – if any – had been played by the safety champion in the process.

The safety champions were also quite limited in the extent of their integration into systems for informing and consulting workers, as well as into the general arrangements for health and safety management. They had neither inspection nor investigative functions such as those bestowed on safety representatives under the SRSC Regulations nor even the more limited functions and facilities granted to representatives of employee safety under the H&S(CwE) Regulations. Nor, with the exception of the one training day they had received, did they appear well supported for their tasks. The limitations of the role and the support for it may have been to some extent a result of its recent introduction and consequent limited experience. However, the absence of these organisational supports combined with the ambiguity of the role, meant that the significance of the position in terms of worker representation and consultation fell far short of that of worker representatives appointed under the relevant statutory provisions. This was borne out to some extent by the respondent’s answers to the questions on who they would talk to first if they had a health and safety problem and who would be most likely to resolve it. There was no category for ‘safety champion’ in the questionnaire as we had not anticipated such persons (and indeed, we did not find them anywhere else in the study). However, it seems probable that many respondents would have identified them with ‘safety representatives’ as the nearest fit in the questionnaire. Indeed, in the case study, 65 per cent of respondents amongst the manual workers thought a safety representative represented them. However only 6 per cent said they would talk first to him/her if they had a health and safety problem and only 7 per cent felt that they would be the most likely person to resolve it. As we shall see later, this is in great contrast with the results to the same questions in case study 5, where there was a health and safety representative appointed under the SRSC regulations present in the workplace.

In case study 4 in contrast to the previous three case studies, trades unions were recognised and one third of respondents to the questionnaire were trade union members. Despite this there were no trade union representatives either for health and safety or for other matters present in the company. There was a full-time trade union regional organiser for the major construction development at which the company was a subcontractor. He covered workers in a number of small subcontracting companies at the development including those of the company that was the subject of the case study.

The HS&E manager consulted with the full time union Regional Organiser on matters such as health and safety training. On day to day health and safety issues the company senior project manager and project manager at the various building projects within the development consulted with the union organiser.

As in other case studies in the industry toolbox talks featured amongst the key arrangements used by managers for consultation. A worker who was a trade union member said of them:

“There is plenty of chance to say what you feel about health and safety. Toolbox talks are effective because you can talk about health and safety. Bits of paper are useless.”

Another worker said of them:

“I have been to over 20 now as they are held once a week. They have been a learning curve for me.’

One of the building project managers said of toolbox talks:

‘Get the point through to the blokes and you will get a lot of feedback’

However not all the workers interviewed were quite so positive:

“I think that they have been set up under pressure from insurance companies. They inform you of your duties, and if you have an accident, they can say that you have been told in a toolbox talk. They are just covering their backs. They are telling us what to do, not including us.”

The Principal Contractor required the *workers’ consultative meetings* to take place regularly and to be attended by workers from each subcontractor at each of the building projects at the development. Site managers believed this was a productive way of involving workers and that “a lot of good things came out of it.”

One worker who attended these meetings with other workers from the sub contractors said:

“It is a requirement for every contractor to send a worker to the meeting. 12-15 attend every week as the Principal Contractor monitors attendance. I have only missed one out of 20 because of pressure of work. I was not elected but asked by my manager to attend. The meetings are minuted and cover canteen issues; welfare facilities, safety and health matters. They are a relatively open forum for issues, with everyone pretty open and not worried about reprisals.’

He continued:

“I think that the concept of these meetings is good. But I am not sure that the Principal Contractor is using it the way they should. It takes a long time to get the points that we bring up actioned. Some of the other workers have stopped coming because the same issues come up each week and they are not actioned and they say “what’s the point in coming?” It seems that they want to enforce issues related to the work we do, but not necessarily theirs.”

There was also dialogue between trade unions and the principal contractor at the level of the construction development overall, that clearly influenced the approach to consultation at the other levels outlined above.

Around half of the manual worker respondents at the company reported that they were consulted by management about risk assessment (52 per cent), safety policies (52 per cent) and procedures for reporting accidents and ill-health (48 per cent). Far more of these respondents were frequently consulted about health and safety matters (38 per cent) than about future plans for the workplace (0 per cent), changes to work practices (9 per cent) or pay (5 per cent). It is interesting to note that despite the well developed arrangements for consultation described in the case study, the proportion of manual workers who feel themselves frequently consulted on these issues are less than in previous case studies. This may result from the company being a subcontractor and therefore all its workers being subcontract workers, who as we will show later, generally experience less consultation and provision of information than workers that are employed by the main contractor.

Case study 5 was focused on another large unionised construction development. Two thirds of the manual worker respondents to the questionnaire were trade union members (67 per cent), the majority of these, as in the previous case study, belonging to UCATT (76 per cent) and the remainder to AMICUS (24 per cent). There was a full-time trade union convenor at the site who was also the health and safety representative appointed under the SRSC Regulations and who played a substantial health and safety role. The convenor confirmed that the high trade union density amongst the manual worker respondents was typical for the 500 or so workers that were present at any one time on the site as a whole. However, there were no trade union health and safety representatives for the employees of sub-contractors. Once again, fear of victimisation was raised as a reason why such workers were generally unwilling to place themselves in this role:

‘I know that if I make too much fuss with my company, they will move me on. If I became a UCATT safety rep, I wouldn’t last five minutes.’

Consultation methods at the company level included a monthly workers’ meeting in which workers from all the main contractors were represented. This had been organised because the union convenor felt that when managers were present, many workers were reluctant to speak out. He believed that workers’ meetings allowed participation of workers without fear of the consequences and enabled him to articulate the health and safety problems they raised with the management. He therefore took forward the views of workers on this committee to the monthly company health and safety management committee for the whole development, that was attended by representatives of the company management, including the development health and safety manager and managers from each of the main sub-contractors on site. Attendance of the sub-contractors was monitored.

The convenor’s role in carrying forward the workers’ views to this meeting was confirmed by the researchers’ observation of both meetings during their site visits. All the items identified by the workers at their meeting were subsequently raised by the union convenor at the site health and

safety management committee with the contractors. Action was taken and recorded and it was further noted at the observed meetings that one of the workers' concerns led to agreement to develop a new site procedure. According to the site health and safety manager:

'The best method of consulting is the workers' health and safety meeting with the union convenor.'

And according to the union convenor:

'This system has worked well, because we all know that problems that are raised by workers can be taken higher and higher.'

At the work gang level, every contractor was required to hold weekly toolbox talks with their workers. A reporting system had been implemented under which the contractors reported to the company health, safety and environment manager giving details of the content of the talk and the numbers attending. However, there was scepticism about the amount of consultation actually taking place through this means and a feeling that the good contractors held toolbox talks but the poorer contractors did not, or according to the union convenor, they :

'... use it as a fag break.'

To address this perceived problem the company itself had introduced toolbox talks for all workers.

Contractors were also required to provide regular method statement briefings as well as briefings on risk assessments and tasks. In theory, workers were encouraged to raise matters of concern about the way the job will be done and discuss them. However, according to one of the workers interviewed:

"With method statements they don't talk to us and the method statements are not adapted for particular circumstances. There is not time for the workers to discuss health and safety at toolbox talks."

Consultation with individuals occurred in a number of ways and was encouraged from the time workers entered the site and took part in the induction training required before being allowed to work on the site. During this daily health and safety induction delivered by the convenor, participants were invited to contribute ideas and were frequently asked if they had any questions. More importantly, they were given a clear lead by the convenor to involve themselves in health and safety matters in the future and to question issues with which they didn't agree. For example he told them:

'If you are given a method statement briefing and you don't agree with it, tell your employer why, and don't sign. Come and see me if there is any problem.'

In keeping with findings in the other case studies, more manual worker respondents to the questionnaire felt that they were frequently consulted on health and safety (22 per cent) than on other matters such as pay (7 per cent), changes to work practices (5 per cent), staffing and redundancy issues (2 per cent), or future plans for the workplace (9 per cent). However, the proportion of manual workers frequently consulted on health and safety was lower than in most of the other case studies, despite the quite extensive arrangements for consultation described above. Proportions of manual workers who felt themselves to have been consulted about specific

aspects of health and safety arrangements were also lower than in the other case studies with for example 28 per cent reporting being consulted on safety policy, and 27 per cent on risk assessment.

The lower proportions may have been the result of management consulting with the trade union convenor/health and safety representative, rather than with workers directly. Certainly, workers' views on the effectiveness of their health and safety representative were positive with a large majority finding him effective at representing their interests (82 per cent), providing them with information (85 per cent) and consulting with them (83 per cent). The most helpful means with which the safety representative kept respondents amongst the manual workers up to date on health and safety were through talking to them (75 per cent), meetings organised by the representative (65 per cent) and through the safety representative's notice board (83 per cent). Respondents were also asked if they were worried about a health and safety problem who they would talk to first and then who would be most likely to resolve it. It is notable that by far the largest proportion of respondents (47 per cent) identified the health and safety representative as the person most likely to resolve a health and safety problem. Interestingly none of the respondents said they would first talk to a HSE inspector and only 7 per cent said that the inspector would be most likely to resolve the problem. According to one of the workers interviewed:

'It is much better with a union convenor [than a manager], because he is independent from the company, although the company are paying his wages. He is one of our own, and I feel that there should be a union convenor on every job. If the lads raise a problem with my company, they fear for their job. So they raise it with the union convenor. I have rung the HSE many a time – but it's like ringing the RSPCA.'

6.3.4 Bridging the gap: consultation, contractors and trades unions

In summary then, while there were a range of different approaches seen in the five case studies to consulting workers on health and safety both directly and through their representatives, the most effective were those in which trade unions were involved. The presence of trade unions, as well as allowing meaningful representation of workers health and safety interests to occur, also seems to be associated with a wider range of approaches to direct consultation and their active operation than found in workplaces without trade unions. At the same time, the complex and fragmented organisation of employment in the case studies meant that the experience of consultation for workers employed by sub-contractors and agencies, was generally poorer than that of employees of principal contractors at the sites investigated. Tables 6.14 and 6.15 illustrate this.

Table 6.14 Percentage of manual workers consulted on various aspects of OHS management according to employment

<i>Experience of consultation</i>	<i>% of those employed by main employer</i>	<i>% of those employed by sub-contractor</i>	<i>% of those employed by agency</i>
On safety policy	59	51	35
On risk assessment	62	40	23
On written records of risk assessment	42	38	12
On procedures for reporting accidents	60	55	59

Table 6. 15 Percentage of manual workers with experience of consultation approximating to its legal definition, according to employment

<i>Experience of consultation</i>	<i>% of those employed by main employer</i>	<i>% of those employed by sub-contractor</i>	<i>% of those employed by agency</i>
Good or very good experience of being kept up to date with changes affecting health and safety	60	40	41
Good or very good experience of being given chance to comment on changes affecting OHS	43	34	47
Good or very good experience of management responding to suggestions	42	35	18
Good or very good experience of management dealing with OHS problems raised	61	47	30

Despite these findings, it was also apparent that in the workplaces with trade unions, extra efforts were being applied to lessen the gap between the experiences of consultation for these various types of employees. Thus, in case study 4 we noted that the trade union organiser explicitly represented the health and safety interests of employees of sub-contractors. At the construction development level there was dialogue between the trade unions, the principal contractor and sub-contractor management. There was considerable involvement of the trade union in training programmes at the site, including training for sub-contractor employees. The principal contractor had also organised workers' consultative meetings at which the attendance of representative employees of sub-contractors was required. In case study 5, again the principal contractor organised special tool-box talks for workers of sub-contractors. The trade union convenor/health and safety representative had considerable involvement in planning and delivering training, he organised a regular monthly meetings with workers from all the main contractors on-site and took forward the issues they raised to the management of the principal contractor.

6.4 CONCLUSIONS

Construction is a hazardous industry in which there are major challenges to improving its relatively poor health and safety performance caused by the nature and organisation of work in the sector. Our case studies demonstrate why this is so. In particular they highlight the fragmentation of work organisation in the industry in which the systematicity of health and safety management arrangements is weakened and the employees of sub-contractors repeatedly fare less well both in terms of their experience of these arrangements and those for consultation on health and safety.

Writing about their research on the limits of self-regulation in construction in the 1980s, Dawson *et al* quoted the previous work of Codrington and Henley when attempting to explain both the industry's 'appalling safety record and its poor response to self-regulation':

'Encouraging workers to obey safety rules and to be cautious in hazardous situations seems unlikely to alter construction workers' priorities since it leaves unchallenged the methods of working that give rise to and encourage unsafe working practices . . . Given the interests of contractors in reducing completion time and workers in

making as much money as possible out of the job, 'co-operation' between the 'two sides' seems likely to encourage unsafe systems of work as much as heightened safety unconsciousness.' (Dawson et al 1988:127-128)

It is these challenges that the CDM regulations and subsequent voluntary initiatives such as Working Well Together sought to address through their efforts to coerce and persuade the industry to effect a change of culture. But how successful they have been seems open to question, despite the claims of the HSE mentioned previously. Indeed, in contrast to such claims, a HSE commissioned research report noted in 2001 (ENTEC 2001: v-vi), there were a number of specific issues and challenges to communication and workforce participation in health and safety in construction including the:

- 'transient nature of the workforce
- focus on price and competitive tendering
- one-off product where design and construction is separated
- lack of leadership and evidence of traditional management style
- risk taking culture'

Our case studies provide little evidence to suggest that in the absence of trade union representation, such challenges to managerialist efforts to create an effective consultative culture for health and safety in the industry have been overcome successfully.

A further requirement for participative health and safety management is that there is sufficient support for this from management, which would appear in part to be a function of size. Because of the complexity of the structure of the main organisations on which our case studies were based we did not attempt to measure organisational size effects. However, the worksites that were the focus of the case studies represented a range of size, from small to very large. It was clear that arrangements for managing health and safety generally and for consultation particularly, were far better developed on the larger sites. It was here that qualified health and safety advisers and managers seemed to have had greatest impact and trade union organisers/representatives were active. The relationship between the individuals in these roles seems to have played a significant role in supporting the development of consultative arrangements. It was important because the extent to which worker consultation can make an effective contribution to health and safety outcomes is dependent on the competence of the delivery of hazard/risk evaluation and control by employers. No matter how accurate a workers' diagnosis of a problem or how practical its suggested solution, if employers are not sufficiently competent to either appreciate or implement them, then the contribution of worker consultation to health and safety performance will be negligible.

In the two case studies in which trade unions were present, more meaningful worker consultation and representation on health and safety was possible. In one of them the regional organiser had taken on the role of representing workers health and safety interests and it occupied a considerable amount of his time. In the other the trade union convenor, with the agreement of the principal contractor management had been appointed as a full-time 'super' health and safety representative with a site-wide remit. In both these cases studies, while differences between the employees of the principal contractor and those of sub-contractors and agencies remained, the quality of respondents' experiences of the arrangements for health and safety management, their experience of training and of the range of various forms of consultation discussed previously, was better developed than in the other case studies. These observations also provide support for the view that direct and indirect forms of employee consultation on health and safety are best understood as mutually supportive elements of a continuum of participative activity rather than as

distinct and exclusive arrangements.⁴⁸ They contrasted with the case studies in which no forms of representational arrangements were in place in as much as they demonstrated greater activity for both representational and direct worker participation in health and safety. They showed that the presence of trade union organisers/representatives clearly stimulated worker participation generally and that such representatives were seen by workers as significant players in this respect.

It is important to recognise the significance of the presence of trade unions in these situations and the role they played in implementing and operationalising arrangements for consultation in ways that were not found in worksites where trade unions were absent. Moreover, while many of their effects could be interpreted from a managerialist perspective as a means of improving communication and enhancing health and safety awareness generally, in keeping with industry strategies to implement the CDM Regulations, there are other ways of understanding what was going on. For example, responses to a question asked about who was expected to resolve health and safety problems showed that in most cases it would be either managers or supervisors who would be expected to do this. However, in case study 5, by far the largest proportion of respondents (47 per cent) indicated that they thought it would be the safety representative who would be most likely to resolve their health and safety problems. These findings, in combination with workers' views about the role of their health and safety representative (such as those expressed in the quotes from interviews presented earlier), make it clear that both in terms of trust and autonomy, they regarded their representative quite distinctly from management. Their identification of his interests in health and safety with their own was clearly seen as important to his success in representing them. In keeping with previous discussion of the findings of studies on the role of worker representation and consultation therefore, this fundamentally pluralistic perspective on safety representatives adds significantly to ways of understanding their activity⁴⁹. It also highlights the weakness and over-simplicity of managerialist prescriptions for consultation in the industry, that have been suggested both by the industry itself and by previous HSE commissioned research on this subject⁵⁰.

At the same time, of course, low trade union density effectively prohibits the automatic development of this type of representation at most worksites. However, rather than ignore its contribution (as seems to have been the case in most previous studies commissioned by the HSE), a more constructive approach might be to recognise the importance of trade union representation and its role in improving meaningful consultation in the industry. This approach then begs a series of questions about what could be done to enhance it.

Clearly simple solutions for effective arrangements for consultation are unlikely to overcome the challenges posed by the nature of employment relations in the industry. In this respect, the likely success of prescriptions based on large increases in trade union density seem as unrealistic as the managerialist notions of 'culture change' discussed previously. A pessimistic view would suggest that, at best, the role of participative arrangements in improving health and safety is likely to be limited to relatively few large sites on which trade unions are recognised, where both they and the management regard such arrangements to be to their mutual advantage. However, there are some signs that such a view may be over-pessimistic. Voluntary approaches such as those supported by the Challenge Fund in which workers, on a range of sites in which consultative arrangements are

⁴⁸ See chapter 2 for a more detailed discussion of previous evidence of this.

⁴⁹ See also chapter 2 for more detailed discussion and Walters and Frick (2000)

⁵⁰ See especially for example, ENTEC 2001, in which, despite being a study on establishing effective communication and participation, such pluralistic perspectives are ignored entirely. Also BOMEL 2004 and the earlier study of Robertson et al 1999 both fail to identify this perspective or include any serious discussion of the role of such representation in their discussion of consultation in improving health and safety.

underdeveloped, gain access to support from trade union worker health and safety advisers are relatively well supported and comparatively advanced in the sector. Also arrangements in which trade union representatives of principal contractor employees gain greater access to employees of subcontractors appear to be increasingly appreciated as useful by employers, regulators and trade unions alike. Linked to partnership arrangements, especially at regional and national levels, alongside other means of using the supply chain to boost support for a commitment to consultation and involvement of trade unions across a range of economic interests, these approaches offer means of extending autonomous worker representation on health and safety. Our findings are broadly in keeping with the idea that these approaches represent ways in which both regulators and trade unions could persuade the industry that more meaningful consultation on health and safety with its workers is both ethically and economically desirable.

PART 3: WHAT WORKS IN WORKER REPRESENTATION AND CONSULTATION IN HEALTH AND SAFETY?

In this final part of the report we discuss our findings in chemicals and construction. We do so first in terms of the extent to which they confirm or contradict previous findings on preconditions for the effectiveness of worker representation and consultation on health and safety. We also consider what the case studies in the sectors we have studied suggest about the limits of the model of representation and consultation that is prescribed by regulation in the UK. In doing so we examine what additional insights they provide on this subject and return to aspects of the theoretical understanding of worker representation and consultation that we developed in Chapter 2.

The discussion of the lessons learned from the case studies, in the context of previous research, leads to a consideration of the way forward for worker consultation and representation in the light of the issues highlighted. We end with some conclusions concerning the likely future of worker participation in health and safety that take account of related wider trends in the politics of regulation.

CHAPTER 7: PREREQUISITES FOR EFFECTIVE WORKER REPRESENTATION – LESSONS FROM THE TWO SECTORS

7.1 PRECONDITIONS FOR EFFECTIVENESS

In Chapter 2 we established that there were several preconditions for effectiveness of worker representation and consultation that have been widely found in a range of studies across a number of countries. They include:

- A strong legislative steer
- Effective external inspection and control.
- Demonstrable senior management commitment to both OHS and a participative approach and sufficient capacity to adopt and support participative OHS management
- Competent hazard/risk evaluation and control
- Effective autonomous worker representation at the workplace and external trade union support
- Consultation and communication between worker representatives and their constituencies

Our findings in the two sectors indicate that where such preconditions are found, worker representation and consultation makes a significant contribution to improved health and safety arrangements, awareness and performance. However, in the majority of cases such preconditions were not found in anything like their entirety, with the result that worker representation and consultation were quite severely constrained in delivering their potential beneficial effects.

7.1.1 A strong legislative steer

The SRSC Regulations 1977 provide the relevant legislative framework for representation and consultation on health and safety in establishments in which trade unions are recognised. This was the situation in all of the case studies in the chemical sector but only two of those in construction. Where the requirements of the regulations had been most completely implemented, as in case study 3 in chemicals, the benefits were significant. They included above average health and safety performance, improved health and safety awareness and increased employee satisfaction with the management of health and safety and with consultation on health and safety specifically. Similarly, in case study 5 in construction, which of all the case studies in the sector came nearest to implementing the main requirements of the Regulations, arrangements for managing health and safety were best developed. They especially included extensive provision for training and for communicating health and safety requirements across the barriers presented by different employment relationships and for consulting with workers of sub-contractors.

However, in the majority of the case studies the impact of the legislative steer was less apparent. This was not simply because of the absence of trade unions but because even when unions were present, certain of the other preconditions were absent or insufficiently developed.

7.1.2 Management commitment and capacity

In the review of the literature presented in Chapter 2 it was argued that the practice of consulting and informing workers on health and safety was one element of systematic health and safety management. It was further noted that it was essentially an aspect of good management practice generally. In both industries, close parallels were observed in responses to questions asked about consultation and provision of information on health and safety with those to similar questions on general employment matters. Additionally, respondents' views on effectiveness of management on health and safety paralleled their views on the effectiveness of management more widely.

In the case studies in the chemicals industry, the degree to which managers were seen to be performing well in all these respects tallied with the findings on other measures of health and safety arrangements, practice and performance, in which case studies 3 and 5 consistently performed better than case studies 1 and 4. The qualitative information obtained from managers, representatives and workers in all of the case studies corroborated these quantitative findings.

In construction the situation was less clear cut and the complexities of work sites meant it was not possible to obtain such clear measures of performance as in chemicals. However, the most notable feature of workers' assessment of the effectiveness of managers on health and safety and other matters was the difference between workers who were employed by the principal contractor and those who were employed by sub-contractors or agencies. It was clear from these results that workers at the end of the chain of communication created by fragmented employment relationships on construction sites, fared least well in terms of provision of information and consultation and also rated managers as least effective at managing health and safety.

Dawson *et al* (1988) in their study of self-regulation pointed to the importance of management will and capacity in making for the success of self-regulatory strategies. Subsequent studies of worker representation in health and safety have emphasised the considerable importance of the full engagement of management in facilitating representation and consultation on health and safety if it is to operate effectively. This was strongly borne out in all of the case studies. In some such as case study 3 in chemicals and 5 in construction, there were clearly representational and consultative practices taking place on health and safety issues that were working to the satisfaction of the health and safety representatives, and the workers they represented. These were the same case studies where there was also strong evidence of a conspicuous commitment to such approaches on the part of *senior* management. It seems likely that although trade union health and safety representatives had been appointed in these workplaces, they would have been unable to function effectively in the absence of management commitment to participation. It was clear for example in the chemicals sector that without such commitment, factors that promote the operation of representative participation either did not exist or had a limited operational capacity. Such factors included for example:

- properly constituted joint health and safety committees at site and departmental level
- accountability of managers to the joint health and safety committee
- engagement of health and safety representatives with the health and safety practitioners from the safety health and environment departments,
- dialogue with local area and line managers within the establishment and health and safety representatives
- the provision of facility time to undertake health and safety representative functions such as joint health and safety inspections, investigations of workers complaints, making representations to managers and so on,

- involvement of health and safety representatives in risk assessment
- involvement of health and safety representatives in reporting and monitoring on OHS
- access of health and safety representatives to workers
- access to training for health and safety representatives

In the case studies in chemicals, where management commitment to participatory approaches was poorly developed such as in case study 1 and to some extent in case studies 2 and 4, these kinds of arrangements were either absent or set up in very limited ways. There were two main aspects of such limitations. One concerned the limited development of the consultative structures and processes themselves, while the other was that the ability of health and safety representatives to find time to engage fully with these structures and processes, or to receive training to do so, was constrained. Both aspects were under the control of management and dependent on its will and capacity to facilitate such participation.

It was clearly a problem for many of the health and safety representatives to leave their workstations to attend to health and safety functions, even where good arrangements to do so existed in theory, such as for example in case study 5 in chemicals. Examples of best practice to enable such activity were found occasionally. For example, arrangements to facilitate attendance of health and safety representatives at safety committee meetings by paying them overtime if such attendance was not part of their normal shift pattern, was described in case study 3. However, this was somewhat exceptional and generally, while rights of consultation may have existed in theory, and time off from normal activities to engage in them was not usually actively resisted by managers, in practice the organisation of work tended to limit the engagement of representatives. In such cases there were few examples of managers proactively seeking to facilitate the engagement of safety representatives in ways similar to that seen in case study 3.

The above arrangements in chemicals, facilitating representative consultation on health and safety, relate to workplaces in which there were safety representatives. In construction a somewhat different situation prevailed as there were no safety representatives present in the majority of the case studies, there was also no recognised trade union and no arrangements for worker representation of any kind. Of the two cases where trade unions were recognised, in one the trade union regional organiser represented the health and safety interests of the workers of the case study firm — a subcontractor on a big metropolitan construction development. He spent a considerable amount of his time engaged with employees and managers on health and safety issues and enjoyed the support of managers. In the other unionised case study in construction, the safety representative/convenor received considerable support for his health and safety role from senior management. That he performed this role conspicuously and did so with considerable success is evident from the response from nearly half of the manual workers surveyed at the site, that he would be the person they thought most likely to resolve health and safety problems.

The situation in terms of the management will and capacity to support representation and consultation in the remaining three case studies in construction where there was no trade union recognition was quite different. It was not clear to what extent the absence of trade union recognition was a reflection of employer hostility to trade unions and unwillingness to consult with them. However, the anticipation of such hostility was certainly felt by workers, who expressed the view that they would not risk becoming a trade union representative for fear of victimisation by present and future employers. Whatever the reality of such hostility it was evident that in these case studies there was no form of worker representation present.⁵¹

⁵¹ For reasons explained at length in Chapter 4, the 'safety champions' appointed in case study 13 in construction could not be regarded as worker representatives

At the same time in all these case studies managers claimed to be committed to consulting their workers on health and safety matters. Indeed, in one case the industry organisation to which the employer belonged —the Major Contractors' Group — had a clear statement on methods of worker consultation in its charter. Nevertheless, there seem to have been several reasons why, despite this formal commitment, the consultation it engendered was somewhat limited. One reason was that there was confusion over what was meant by consultation. Many managers clearly believed that it meant simply informing workers about management requirements on health and safety practices. Other obligations implicit in the legal definition of consultation such as the notion of two way communication, communication in good time and the ability of workers to be able to either respond to information from managers or to give managers information were not acknowledged. A further reason for limited consultation that we have already touched on was the fragmented employment relationship at work sites. The management of the principal contractor at the work sites may well have had strategies for information dissemination to workers, as well as for worker involvement in developing method statements, risk assessment and so on. Their delivery to workers of sub-contractors however was often extremely limited and there were few supports in place at this level to improve this delivery — even when firms had well defined policies on using their position in the supply chain to influence the health and safety arrangements of sub-contractors. Indeed, one of the strengths of the role of health and safety representatives at unionised sites was that they were able to act as a conduit for communication on health and safety between the sub-contractor workforce and the management of the principal contractor. Therefore at these sites there was a far greater experience of successful communication across the barriers created by fragmented employment relationships and trade union representatives played an important role in both facilitating and supporting such communication.

One aspect of health and safety management that was absent in the case studies was any attempt to consider preventive approaches from the perspective of their economic effectiveness. Considerable attention has been paid to the 'business case' for health and safety in national pronouncements on the subject in recent years.⁵² Efforts to develop suitable tools for employers to measure the economic impact of health and safety interventions have also been prominent in the dealings of the regulatory authorities with employers⁵³. It might therefore have been anticipated that there would be some evidence of such activities in the case studies, especially in larger establishments. A particular interest for the researchers was whether and to what extent health and safety representatives and arrangements for joint consultation might relate to such approaches in practice. However, somewhat surprisingly given the rhetoric surrounding this matter, in none of the case studies did there appear to be any systematic arrangements in place to include the costing of injuries or ill-health, or their prevention in the observed approaches to health and safety management. Managers were asked about this and whether the costs of injuries were taken into account in their strategies on health and safety. The responses indicated that in every case they were not. The principle reasons given for this included the notion that the case for prevention could be made easily enough without having recourse to economic arguments (chemicals case study 3) and the observation that successful claims for compensation for injuries were anyway infrequent and not significant (chemicals case study 5). In construction, there was awareness amongst managers that monitoring and keeping records of the health and safety performance of contractors and the actual or threatened use of this information to award or deny

⁵² *The business case has been an increasingly prominent aspect of government policies on health and safety. It is a major theme in HSC/HSE strategic statements such as for example Revitalising Health and Safety (2000), the current HSC Strategy 2004-2010 and was also evident in campaigns such as Good Health is Good Business.*

⁵³ *For example, there has been much publicity associated with the development of a 'ready reckoner' to assist employers calculate the cost of health and safety (Marsden et al 2003).*

future contracts, might be a powerful tool with which to influence their behaviour. In practice however, it was not clear to what extent such strategies were widely adopted. If they were, they did not involve consultation with workers or any linkage between such records and economic calculations in relation to profitability.

7.1.3 Competent hazard/risk evaluation and control

In the case studies, the question of competence in relation to the employers' arrangements to manage health and safety systematically and in accordance with the requirements of legislation and good practice was not explored directly because the primary focus of the study was on participative arrangements. Nevertheless, this focus on the ways in which participative approaches were facilitated allowed an indirect perspective on management arrangements for risk evaluation and control more generally and enabled some insights into the relationship between these and arrangements for worker consultation and representation.

For example, in chemicals it was noted that there were health and safety practitioners in all the case studies, and in the larger ones, health safety and environment departments staffed with several specialist practitioners. Their widespread presence can be largely explained as the employers' response to the high-risk nature of many establishments in the industry, combined with the requirements of legislation to manage risks competently and the comparatively frequent inspection of establishments. This is a situation of long standing and was well established in the 1980s when Dawson *et al* conducted their study. In contrast in construction, Dawson *et al* noted that in the 1980s the presence of health and safety practitioners was something of a rarity. One of the aims of national health and safety strategies in the sector since that time has been to increase this presence and the role of competent advice in the sector. If our case studies are at all typical of the industry, they would suggest that these strategies have achieved some measure of success, for we found health and safety practitioners in all of our case study companies.⁵⁴

In most of the case studies in both sectors there was considerable reliance by senior managers on the expertise of health and safety specialists. In chemicals there seemed to be two models for the role of such expertise and the reliance placed on it by managers. In one version, control of health and safety was completely vested in the health and safety manager. In the other, the health and safety manager/department played a considerably more advisory and facilitating role, supporting managers at site, line and functional levels to discharge their own health and safety responsibilities. In both cases however, it was the health and safety practitioners/managers who played key roles in the design and operation of systems for risk evaluation and control. Even more importantly from the perspective of our study, they also played pivotal roles in facilitating the extent and nature of participation on the part of the health and safety representatives. In this, there was a relationship with some of the wider indicators of management arrangements to support health and safety representation and communication.

Since regulatory requirements in construction lay down specific responsibilities for persons in charge of various elements of the construction process it was in some ways easier to discern the advisory role of the health and safety practitioner in this industry. Like chemicals however, they played a central role in the design and monitoring of the systems in place for health and safety management and therefore also played a pivotal role in arrangements and practice in relation to worker representation and consultation.

⁵⁴ It should be noted however, that parent companies in all cases were medium to large organisations.

Thus, in chemicals we found the greatest proportion of respondents who thought management of health and safety to be very effective in cases studies 3 and 5 where the health and safety specialists played a more advisory and facilitative role. As we have also reported it was in these two case studies that were found numerous other indicators of the positive role of representation and consultation in health and safety performance. It is especially noteworthy that although the involvement of worker representatives and workers in the practice of risk assessment/evaluation was generally limited, it was most developed in these establishments.

In two of the remaining chemicals case studies, 1 and 4, there were health and safety managers that were regarded by other managers as having overall responsibility for implementing health and safety arrangements. These were the two case studies in which a culture of attributing injuries to the unsafe acts and attitudes of their victims was most prominent and where involvement in health and safety by workers and their representatives was least developed generally and specifically in relation to risk evaluation. They also performed least well in terms of our indicators of health and safety outcomes. As we have already seen these were also the cases in which management commitment was lacking.

In conclusion therefore, it seems that in chemicals and construction, health and safety practitioners played an important role in determining the quality of the operation of arrangements for health and safety. They were also sometimes a significant influence on the nature and operation of institutional arrangements for representation and consultation. In both cases, this is a role that has been little studied in the UK. How widespread and important is their presence and influence on participative arrangements for health and safety is unclear. Nevertheless, our case studies suggest that the presence and role of health and safety practitioners is an additional element that needs to be taken into account in future studies examining the effectiveness of arrangements to improve health and safety at work.

7.1.4 Autonomous worker representation at the workplace, trade union support and effective communication between worker representatives and their constituencies

Most previous research and theoretical explanation for what happens and what works in worker representation and consultation in health and safety, strongly indicates that a precondition for success is the presence of autonomous worker organisation at the workplace, and support for it from trade unions. Relatedly, as well as being able to communicate with managers, to be *representative*, worker representatives must communicate effectively with their own constituencies and enjoy their trust and support of those they represent. As previous studies have demonstrated, they are more likely to be able to do so through the presence some form of worker organisation within the establishment that is independent of management than by any other means⁵⁵. These preconditions for the success of worker representation and consultation on health and safety are additional to the existence of a legislative steer, management commitment, support and competence, although — as is clear from the previous sections of the present chapter — they are also often involved in facilitating these supports too.

Our case studies confirm such previous findings. They show for example a strong association between management arrangements, workplace trade union organisation for health and safety and health and safety performance in the case studies in the chemicals industry. In construction, the workplaces in which trade unions were recognised and workers had some form of representation

⁵⁵ *The quite extensive evidence for these assertions is discussed at length in Chapter 2*

on health and safety, were also the ones in which there were the most developed arrangements for informing and involving workers generally in health and safety. Moreover, they were the ones in which the greatest efforts had been made by managers to overcome the barriers to communication presented by fragmented employment relationships.

Other reasons for emphasising the importance of worker organisation, inside and outside workplaces elaborated by previous research included the importance of having competent health and safety representatives in place. The contribution of training, organised and delivered by or on behalf of trade unions, has been frequently identified as crucial in achieving this. In keeping with these findings our research indicated that in both the sectors studied, the case studies in which health and safety performance and arrangements were best developed also had health and safety representatives with a significant level of trade union training.

These findings are also helpful in a further consideration of the conclusions of our earlier re-examination of the British quantitative evidence of the role of trade unions in improving health and safety performance reported in Chapter 3. It will be recalled that we were unable to confirm more than that the arrangements for occupational health and safety should not be left to management alone. We indicated that further and more extensive research was required to understand the effects of other actors and processes such as trade unions and suggested that such research needed to go beyond the analysis of information on formal institutional arrangements and consider the dynamics of their operation. We have been able to consider such dynamics in our case studies. These provide evidence of an association between the role of organised workers and health and safety performance mediated through arrangements for worker representation and consultation which in turn have to be seen in the context of wider institutional supports.

The case studies also throw some light on the relationship between representative worker participation and direct worker participation in health and safety. In chapter 2, following Walters and Frick's (2000) previous analysis, we suggested that the most useful way of understanding these different forms of worker participation in health and safety was to regard them as parts of the same continuum of participation and an influence on one another. The experiences examined in our case studies suggest that such an interpretation is correct. Although they are distinguished in the legislative frameworks for representation and consultation in health and safety and also sometimes posed as alternative approaches to achieving worker involvement, the reality is that in practice they are not separate: worker representation and direct worker consultation support one another and are a strong influence on each other's effectiveness.

For example, workers in the chemicals industry in establishments such as case study 3 where trade union representation was highly developed were most aware of management having safety policies and undertaking health and safety procedures such as risk assessment. Greater proportions of respondents in establishments where representation was well developed as in case study 3 and case study 5 also indicated that their management was better at keeping them up to date about change, giving workers the opportunity to comment and responding to suggestions. In contrast, in case study 1 in which both representative and direct participation functioned poorly, respondents were least aware of management arrangements and represented the lowest proportions of respondents who felt themselves to be consulted on these issues.

Qualitative information from interviews added weight to these quantitative findings in the chemicals industry. Workers, representatives, managers and supervisors in case study 3 described wide ranging and related consultation and involvement of both workers and their representatives in health and safety practices and procedures. While in case study 1 especially, but also in case study 4, there was far less such involvement. Additionally in these establishments workers and

representatives expressed concern about the absence of effort from their managers to engage them in active ways in the making and operation of arrangements and procedures for health and safety. That is, in these workplaces there was a marked absence of effort to create a 'participatory culture' and to engage in both representative and direct consultation with workers in ways that came close to the legal meaning of the term 'consultation'.

In the case studies in construction a similar relationship was observed. The best-developed arrangements found at the work sites for direct consultation with workers across the full range of employment relationships was where there was trade union representation. It was also apparent from interviews with both managers and workers that the trade union representatives had played a part in setting up these more extensive arrangements for direct consultation. Therefore, in conclusion we note that in both sectors effective direct consultation with workers on health and safety is most likely to occur in conjunction with operation of arrangements for the representation of workers on the subject.

In summary therefore, our analysis has demonstrated a strong relationship between workers' perceptions of the extent of hazards of their work, the health and safety performance of establishments in which they work and arrangements made in these establishments for representing and consulting workers' interests in health and safety matters. Establishments in which such arrangements were best developed were also the ones in which there were a range of positive outcomes in terms of perceptions and performance on health and safety. The study has also shown a close association between the development and operation of arrangements for representative participation and direct consultation with workers on health and safety, with workers reporting greater satisfaction with direct consultation between themselves and their employers in situations in which representative arrangements were well developed.

7.2 THE LIMITS TO THE MODEL

In the years since the HSW Act 1974 and more especially since the adoption of the EU Framework Directive 89/391, there has emerged a fairly consistent theoretical approach to how systematic management of health and safety should operate. Where such an approach is operational, improvements in health and safety performance are anticipated. The findings in the previous two chapters generally confirm this thinking and show that provided the preconditions that we have identified apply, worker representation and participation plays an important role in achieving effective systematic occupational health and safety management.

However our findings also show that such preconditions are not found in many workplaces and consequently arrangements for consultation and representation were far from ubiquitous across the ten case studies in the two sectors.

7.2.1 Limits to the regulatory steer and external enforcement

That effective participative arrangements for health and safety do not automatically exist in establishments to which the relevant legislation applies was evident from the experiences we have discussed in the chemicals sector. Here, whereas union recognition meant that the SRSC Regulations applied in all five case studies we found that in most of them worker representation operated at a level some way below that which might be anticipated from the provisions contained in the regulations.

For construction the situation was worse. There were several reasons for this. First, the SRSC Regulations apply in establishments in which employers recognise trade unions. The legal

definition of recognition therefore technically limits universal application of the regulations.

There was as a consequence for example, no need for the employers in three of the construction case studies to implement the regulations. The need to address this was in part a reason for the introduction of the weaker measures of the H&S(CwE)Regulations 1996⁵⁶. However, we found little evidence of the use of these regulations in any of our case studies. Indeed the only case study in which any RESs were found was one chemical establishment in which trade unions were recognised and there was already a well developed structure for the representation of workers in place under the SRSC Regulations. Election of RESs had taken place amongst workers who were not covered by these institutional arrangements and indeed, it was stimulated by the presence of arrangements for the rest of the employees that were made under the SRSC Regulations.

The less than complete coverage of the SRSC Regulations and the potential for further decline through non-recognition or derecognition of trade unions are an obvious weakness of the provisions. The failure of the H&S(CwE)Regulations 1996 to adequately address this has been well documented (James and Walters 1997), leading to the call for further legislation consolidating and improving both these sets of provisions as we discussed in Chapter 2. Our findings suggest however, that such weaknesses of coverage are not the only limitations in the application of the legislative provisions. We found even amongst the establishments in which trade unions were recognised and the SRSC regulations supposedly implemented, the extent and operation of the institutional arrangements made under them were limited and it was clearly apparent that they were not applied to the same extent or to the same effect everywhere. For example, in case study 3 in the chemicals sector, it was possible to identify the operation of many aspects of worker representation and consultation as following the provisions laid down in the Regulations. This could hardly be said of the practices in other establishments in the sector such as case study 1, where the safety representative was able to exercise few of the functions given to him under the Regulations and had been provided with no facilities or training to do so.

There was no evidence that their implementation or operation had been influenced in any way by the intervention of the regulatory agency. This was despite the fact that in the case of the establishments from the chemicals industry, most were covered by the COMAH regulations and subject to greater than average scrutiny by the HSE. Similarly, in the case of construction, the whole industry experienced relatively intense regulatory scrutiny and the management in all the case studies were familiar with HSE inspection. However there was no indication that this relationship with the regulatory agency had ever involved any action or advice by inspectors on the implementation or operation of arrangements for joint consultation on health and safety in either sector. It further appears that in all of the establishments in both sectors inspectors had followed the traditional approach of the HSE towards the implementation and operation of these Regulations. Paragraph 3 of the Approved Code of Practice accompanying the 1977 Regulations states:

‘The employer, the recognised trade unions concerned and safety representatives should make full and proper use of the existing agreed industrial relations machinery to reach the degree of agreement necessary to achieve the purpose of the Regulations and to resolve any differences’

⁵⁶ *Although the threat of the ECJ was undoubtedly more persuasive for the Conservative Government that was responsible. Moreover, the fundamental weakness of these regulations in terms of their provisions for representation is as James and Walters have identified found in the discretion they offer employers to consult directly with workers as an alternative to making arrangements for the election of RESs.*

Guidance from the HSE to its inspectors issued in 1978 with regard to the application of the Regulations stated that inspectors should not consider enforcement action until they are satisfied that all voluntary means of resolving disagreement have been resolved⁵⁷. It encouraged them not to become involved in disputes over the application of the Regulations but rather to leave their resolution to industrial relations processes at the workplace. Although in recent years, HSE guidance has encouraged a more pro-active role for its inspectors in their dealings with health and safety representatives, in practice this rarely appears to extend to formal interventions on the application of the Regulations. There was certainly no sign of this in any of the case studies in chemicals and construction.

Implementation and operation of the regulations were therefore more dependent on the wider relationship between the trade unions and the management determining implementation within each establishment than any external enforcement pressure. A consequence of this was the under-implementation of certain requirements, which was repeatedly seen throughout all the establishments in the chemicals sector. Even in case study 3 in chemicals, where arrangements were certainly the best developed, they fell short of what is provided for in the regulations in a number of important respects. These included for example, consultation over the appointment of competent persons, over training and over the introduction of new technologies. In the other case studies, health and safety representatives' experiences of the operation of the legislative requirements were even more limited. They ranged from experiencing difficulties in obtaining information, time and facilities to undertake practically all aspects of their functions as in case study 1, to not taking part in more specific activities such as risk assessment or joint inspections as in other case studies in chemicals.

The situation in the only case study in construction in which there was a safety representative appointed under the SRSC regulations was somewhat different. Here the trade union, in agreement with the management of the principal contractor on this large construction development, had appointed a full-time health and safety representative in the form of the trade union convenor. He appeared to undertake an extensive range of functions and enjoy facilities that went beyond those laid down in the SRSC Regulations and its accompanying guidance. However, the relationship between the convenor/representative and the principal contractor in this case study was quite unique and his functions and facilities were a product of this relationship far more so than they were the result of the requirement to apply the SRSC Regulations.

Therefore, in nearly all the case studies where the SRSC Regulations applied, the activities of health and safety representatives fell short of their potential in many areas defined in the legislation. This is an important observation for two reasons. First, because it must be borne in mind that the model provided for by these regulations is widely regarded as 'the preferred approach' to representative participation, other provisions being acknowledged to provide somewhat lesser rights on representatives of employee safety⁵⁸. Second, the legal model on which the development of these regulations was based adopted a set of assumptions about the capacity of their beneficiaries to ensure their application without the further intervention of either the law or the regulatory agencies⁵⁹. Third, under the present legal framework, as already pointed out, these regulations only apply in the limited proportion of establishments in which trade unions are recognised – which has diminished considerably since they were introduced in 1978. It is

⁵⁷ See Walters and Gourlay 1990: 124-128

⁵⁸ See chapter 2 (page) for a fuller discussion of this point

⁵⁹ See Wedderburn (1980), who referred to them as auxiliary legislation in common with other measures on employment rights and industrial relations from the same period. Such measures developed 'individual intermediate rights' contingent upon trade union membership and encouraged collective bargaining and trade union recognition as the preferred means of regulating relations between employers and employees.

assumed that it is in such workplaces that the pre-conditions for their effective operation are most likely to exist. If, as our case studies suggest, even in these workplaces representation operates in practice at some way below the requirements the Regulations lay down, it seems there are important questions to be answered concerning the role of the legislative steer. It is important to know why the Regulations are apparently not fully operational, how widespread is this situation and what, if anything, can or should be done to improve their implementation. We will return to this discussion later in this chapter when we consider the future for the regulation of worker representation and consultation on health and safety in the UK.

7.2.2 Other limits to the model

Management commitment and capacity: In both chemicals and construction, measures of respondents' perceptions of the effectiveness of health and safety arrangements were strongly correlated with those of their views on the effectiveness of management more generally. Moreover there was a positive association between the presence of arrangements for representation and the views of workers on the extent to which they regarded management as effective in health and safety, and believed themselves to be trained, informed and consulted on the subject. However, this should not obscure the fact that in many cases the proportion of respondents expressing positive views on these issues, such as for example those who said they had received health and safety training or were consulted frequently was often quite small. This suggests that while arrangements for representation may well be associated with improved experiences for workers on these issues, there is some way to go before it could be said that such experiences were either ideal or universal.

Furthermore, the dependency of arrangements for worker representation and consultation upon the systematicity of management arrangements for health and safety and for managing the activities of organisations more generally suggests that in practice management commitment and capacity is likely to pose considerable constraints. In the chemicals sector for example, we have seen that despite the relevance of the 'preferred approach' of the SRSC regulations to these workplaces, considerable limitations to the operation of such representational arrangements were found in practice. They could be related to the lack of systematicity in management arrangements for health and safety generally in these establishments.

In construction the systematicity of health and safety management is known to be problematic for a host of reasons to do with the nature and organisation of work in the sector. Worker representation and consultation on health and safety is further acknowledged to be beset with considerable problems for the same reasons and also because of the hostility towards trade unions and their representatives that formerly characterised the attitudes of many employers in the sector⁶⁰. Generally arrangements for consultation in the cases studies we examined were weak, one sided and provided workers who were not employed by the main contractor with little involvement. There were few if any of the case studies where it could be said that arrangements for consultation with workers or their representatives operated in line with the legislative provisions. They worked best, as we have seen, in the two unionised large metropolitan construction developments we investigated in case studies 4 and 5 in the sector. In both cases this was not because of any effort to implement the legislative requirements *per se* but rather because representatives of trade unions and the principal contractor management had come to

⁶⁰ Although many of the larger employers in the construction industry have quite recently adopted a more favourable stance towards trade unions and their representatives, it is far from clear how widespread this is. As we note elsewhere in this report, it was certainly not perceived to be so amongst the workers we interviewed.

arrangements that reflected their perceptions of issues that needed to be addressed in their local situation. They were seemingly not directly influenced by the requirements of the regulations nor did they consciously seek to implement them. Therefore in both sectors we conclude that the model of consultation and representation provided under the SRSC Regulations 1977 had limited application while that of the H&S(CwE) Regulations seems to have had minimal application.

If regulatory pressure is deflected because of lack of union recognition or applied inadequately because of loopholes in its content and absence of the pressure of enforcement, employers may be influenced by levers such as supply chain pressure, by the general 'culture' of the industry or by exhortation from figures of authority and leadership in the sector. But in the end, the choice of whether and to what extent to implement is theirs. This would seem to be what occurred in the three cases in construction where there were no trade unions. As we demonstrated in the previous chapter, employers in the construction industry have been under intense pressure from all such sources to improve the health and safety performance of their sector during the past decade and the issue of increased consultation with workers has featured prominently. In the three case studies, managers believed they had responded to pressure and had introduced appropriate measures. However, in all cases arrangements for direct consultation were applied unevenly and with little effect on those workers who were not employees of the principal contractor. Their application and operation contrasted in these respects with the measures applied in unionised worksites. Our evidence indicates that this is the direct consequence of the activity of the trade union representatives/organisers concerned. The problem therefore seems to be that perceptions on the part of managers that they are consulting with their workers are insufficient to ensure proper consultation. Additional checks and balances are required, that could be supplied by organised workers. And as long as the culture of the industry remains hostile to such organisation, this is unlikely to occur on anything like the scale required to effect real change.

Employer competence and the role of specialist advice on health and safety: The character of health and safety operations, including the style and extent of consultation with workers, was often strongly influenced by individual approaches of health and safety practitioners. While the effects of this that we observed were usually examples of good practice, dependence on the presence and role of individual health and safety practitioners for their introduction and operation may have contributed to inconsistency in the systematicity of management arrangements generally. Because of the more complex and changing nature of the organisation of work in construction these effects were likely to be more pronounced here than in the more stable and systemised chemicals case studies. At the same time, it was notable that where there was worker representation in the construction sector, the relationship between the representatives and the health and safety practitioners was a strong one in which a mutual interest in co-operating on health and safety issues appeared to be well established and lead to good practice.

Change in the nature and organisation of work: Considerable changes have taken place in the nature and relationships of employment since many of the seminal findings on the supports and constraints on worker representation and consultation on health and safety were first made. As we pointed out in Chapter 2, it is widely reported that such changes impact negatively on the operation of worker representation and consultation because they undermine many of the preconditions for its success. The industries selected for our investigation were chosen in order to investigate the extent to which this might be the case. We therefore deliberately chose to revisit industries in which Dawson *et al* (1988) had examined arrangements for worker participation in health and safety in their key study during the 1980s on the limits to self-regulation under the

HSW Act. A further reason for concentrating especially on chemicals and construction was the contrast with one another that they presented.

The chemicals industry represented relative stability on various measures of production and the employment relationship. This stability combined with continued economic success and a high level of hazardous processes and installations causing quite close regulatory scrutiny, meant that well developed health and safety arrangements might be anticipated. In contrast the construction industry was less stable and featured a pattern of fragmented arrangements for its operation including multi-employer worksites, small firms, contractor and agency workers, weak trade union organisation and so on. In this situation the introduction and maintenance of arrangements for health and safety management and especially for worker representation and consultation on the subject could be anticipated to be more problematic.

As we have already discussed, two important further limitations emerged from our investigations. One was a confirmation that the pattern of fractured employment relationships found in construction made systematic risk management more challenging and within this the role of worker representation and consultation more difficult. These patterns in the structure and organisation of work that are the norm in construction continue to grow rapidly in other sectors. The challenge this represents for conventional approaches to achieving participative arrangements for health and safety management will be apparent. Nevertheless, it is worth noting that in the one case study in construction in which there was a safety representative appointed in accordance with the SRSC regulations, mechanisms were in place for dealing with some of these challenges. While it is unlikely that identical approaches would be viable on anything other than large and relatively long-term construction projects, it does perhaps suggest that means of addressing the challenges to representation may be found from within existing frameworks.

A second limitation was amply illustrated by the case studies in the chemicals sector. Dealing with the obvious structural changes in the organisation of employment may present a challenge for strategies on worker representation and consultation in many sectors. But as we have also seen, it does not automatically follow that in situations in which the structure and organisation of employment has apparently remained relatively stable there will be effective arrangements for representation and consultation in place. Indeed as we have shown, the different circumstances of the establishments represented in our five case studies in the sector produced very different arrangements. Some of these differences had to do with the willingness and capacity of managers to countenance them, but others were related to less obvious aspects of change in the organisation of work. For example it seems likely that reduction in the number of workers employed in the industry since the 1980s, has been paralleled by an intensification of the work of the surviving workforce. Health and safety representatives and workers in our case studies that performed less well than average in chemicals frequently complained of lack of time to undertake the sort of activities such as attending meetings, briefings, training or being able to talk to constituents that are essential for effective consultation. The primary reasons for such complaints were the staffing levels experienced, shift patterns worked, and location of jobs, all of which contributed to workers and their representatives feeling they were unable to leave their work-stations. It is significant in this respect that in case study 3 in chemicals, there were a variety of arrangements in place to overcome these problems. They included greater flexibility in staffing to enable safety representatives to leave their work-stations when necessary and recompensing safety representatives that attended health and safety meetings held outside their shift patterns. Overall, these kinds of arrangements helped to raise the profile of health and safety and there is little doubt they contributed to the perception held by the majority of respondents at the establishment that health and safety was being managed effectively.

7.3 CONCLUSIONS AND WAYS FORWARD?

Since the election of a Labour Government in 1997 there have been frequent calls for a new, consolidated and improved regulatory basis for worker representation and consultation on health and safety. These demands have concerned:

- rationalising the existing multiple sets of regulations into one comprehensive set of regulations, and ensuring that all workers have access to representation
- increasing the specific rights of trade union health and safety representatives, including giving them rights to issue quasi-legal notices and for their trade unions to initiate private prosecutions,
- making employers' duties to respond to representations more explicit and onerous,
- giving representatives greater capacity to represent employees who are not employed by the same employer as they are, (including employees in small firms)
- increasing the role of regulatory agencies in seeking compliance with the legal requirements for representation and consultation

While a perfectly good case can be made for consolidating and strengthening the existing provisions along these lines⁶¹, the fact remains that to date no such consolidation or strengthening has taken place. As we saw in Chapter 2, instead the HSC has published a voluntary statement of principle in which the trade unions and employers represented on the HSC agree that representation and consultation on health and safety is a good thing. The chairman of the HSC has also publicly set his face against such legislative action, arguing that health and safety representatives:

‘... do a good job precisely because they are not inspectors and can improve health and safety informally. Increasing their powers would dramatically change their job⁶²
...’

Such sentiments provide a very clear confirmation that the direction preferred by current policy makers on health and safety is actually away from further regulation and one that emphasises voluntary effort.

The main conclusion that emerges from our findings is that worker representation and consultation in the UK have a significant role to play in improving health and safety at work at a variety of levels. They have the potential to raise health and safety awareness amongst both workers and managers, effect improvement in arrangements for managing health and safety, improve the practical implementation of these arrangements, and contribute to improved health and safety performance. Most importantly they represent means by which workers' voice can be constructively heard and acted upon to the benefit of those that experience the risks of the production process.

However, our findings confirm that there are certain preconditions for effective representation and consultation. Arguably, most of these preconditions, such as the commitment of senior management to health and safety and its systematic management, competent risk evaluation and

⁶¹ The latest in a long line of calls for reform made since 1997 can be found in the Report of the Parliamentary Select Committee of Inquiry into the Work of the HSC/HSE which recommended in July 2004 that health and safety representatives be given powers to initiate private prosecutions and issue enforcement notices. It called on the HSC to publish proposals along these lines before October 2005.

⁶² Remarks attributed to Bill Callaghan in *The Safety and Health Practitioner* September 2004:, page 2.

control and effective external inspection are simply aspects of good occupational health and safety management practice that is already required by EU and UK law. Additionally the right of workers to representation on health and safety as well as the right to be consulted appropriately on health and safety issues as well as on other matters are fundamental aspects of workers' rights in the EU generally. Yet despite the legal basis of these preconditions we found that they were by no means always in evidence at the workplaces we studied. In short, these legal requirements had not been implemented. Given that our choice of workplaces probably represented the better end of the industries we chose to study, we can assume that the preconditions we have identified will be less frequently found elsewhere.

The evidence of our study, combined with that of previous work suggests that existing legal measures — on such matters as training, rights to make representations to employers, to receive information, engage in risk assessment, to be consulted prior to workplace change that might affect OHS and to liaise with inspectors and OHS professionals — are all rarely acted upon in practice. In addition these and other requirements are rarely, if ever, the subject of enforcement by the regulatory agencies. Therefore, if the wider legal basis were to be properly implemented it would considerably improve the present situation.

The debate as to the efficacy of further legal reform and enforcement in addressing this problem as opposed to voluntary means to achieve similar ends by 'winning the hearts and minds of industry' and through exploiting various levers in the social and economic environment of business, is clearly set to continue. Nevertheless, our findings suggest that there is a practical agenda for research that could be followed in the interim in which more detailed analysis could be employed to help better understand the supports and constraints of best practice as well as helping to inform the continuing wider policy debate.

In thinking about such a future research agenda in the light of our findings, there are at least two important considerations to take into account. The first is to further establish the extent to which existing measures and strategies have been effective, to undertake a more detailed analysis of the situations in which they work best, and also to identify how they may be improved to address known *existing* deficiencies. It is therefore necessary to understand more clearly both what are the supports and what are the barriers to the operation of best practice in what, after all, are quite fundamental elements of the EU law on the management of the working environment.

A second equally important consideration is to account for the changes that have taken place in the structure, organisation and labour relations contexts of the work situations in which worker representation and consultation is supposed to take place. In so doing it is necessary to ask whether present legal provisions and the strategies of the interest groups involved continue to be relevant or whether their revision is required. The original conceptualisation of the legislation on worker representation and consultation was enabling and constitutive. That is, measures were envisaged to provide a clear message to employers concerning their obligations in the labour relations of health and safety at work. They established basic institutions of worker representation via health and safety representatives and joint health and safety committees. They provided rights to information and consultation on OHS, thus helping to establish the basic floor of rights on which organised workers could build. But does this approach sufficiently address the current situations in which the employment relationship that was the basis of the labour law under which such measures were made has changed fundamentally for many people currently engaged in paid work?

Again the policy answers to these questions are likely to be driven by wider political and economic considerations and will remain part of the larger debate on the future of regulatory

strategies on health and safety for some time to come. But here too there is a clear research agenda in the interim. Underpinning all strategies to improve worker representation in OHS is the necessity of enabling *all workers* involved in the conduct of an establishment's undertaking to be represented, whether as an employee of the firm or of another person, or as a contractor of the firm or of another person, and regardless of whether the person actually works at the firm's premises. This, as we have seen, requires consideration to be given to how the employees of contractors are to be consulted. But it also requires sufficient understanding of the issues involved so that practicable steps may be advised in which part-time, temporary or home working employees for example, could also be effectively consulted.

Relatively new and more embracing responsibilities about consultation processes on employers in charge of multi-employer worksites involving subcontractors, agency labour and the like already exist in construction. Our evidence suggests they are in themselves insufficient to effect the increased consultation they require. However there remains much to be learned about best practice in these situations, and equally important how it might be applied in other related scenarios such as in small enterprises, the fragmented employment relationships in other sectors, homeworking and so on. In all cases however, the need for workers' representation on health and safety is both demonstrably important and frequently problematic as a consequence of the 'structures of vulnerability' with which workers in such situations are surrounded.

In the meantime the research suggests that if these challenges are to be adequately addressed, now and in the future, there are a number of questions regulatory agencies, employers and trade unions need to ask themselves about their strategies on worker representation and consultation on health and safety.

Regulators might begin by inquiring whether they have means at their disposal to bring worker representation and consultation in all workplaces up to the level of activity implied (but not yet achieved) by existing legal requirements. To do so would require a mixture of more consistent, robust approaches to regulation and its enforcement in combination with the strategic exploitation of levers and supports in the social and business environment of firms to influence adoption of more inclusive methods of self-regulation. Whatever combination of methods are used by regulators, our study demonstrates that it is vital that a shared understanding of the meaning and potential of worker representation and consultation is held and the prerequisites for its success are properly understood and implemented by all stakeholders. This also means the recognition of the role of trade unions as important organisations in supporting worker representation. As is shown by the activities of trade unions in our case studies in construction, as well as by our review of their activities in relation to small workplaces in the UK and elsewhere, such a role is not necessarily limited to traditional workplace representation, but may have more extensive applications in relation to hard-to-reach groups. It could also have a potential to relate to non-union situations.

However, if trade unions are to improve the representation of workers on health and safety within workplaces and prove a useful support for engaging workers outside traditional boundaries, there are important questions they also need to address. Significant amongst them are the implications for trade union organising strategies of this wider remit on representation and consultation on health and safety. Consideration also needs to be given for example, to the ways in which traditional notions of competence, advocacy and representation may require modification to fit emerging work scenarios. Trade unions could further consider ways in which new alliances and partnerships could be developed at sectoral, local and other levels to promote representation and consultation in workplaces. New alliances in the wider communities in which workplaces are

located are additional means through which representation and consultation could also be extended to hard-to-reach groups of workers.

All of this of course requires commitment and co-operation from employers. The message that advocates of the role of worker representation and consultation in managing health and safety therefore need to press home to employers is that such arrangements are required by law, they are both ethically and economically desirable and they work better than unilateral ones in improving health and safety performance.

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APPENDIX 1: ARRANGEMENTS FOR HEALTH AND SAFETY AND INJURY RATES: TECHNICAL DETAILS

In Chapter 3 the quantitative evidence in the UK concerning the relationship between arrangements for health and safety and injury rates was presented. At the core of the chapter was a re-analysis of evidence concerning the relationship between trade unions, joint arrangements and injuries through replication of a previous study using data from the WIRS 1990 data set and an extension of this approach to the WERS 1998 data set. The full results of these efforts are published elsewhere (Nichols *et al* 2004). However, the following tables summarise the relevant statistical results, first in relation to the replication of the study by Reilly *et al* 1995 and second, from the extension of the method to WERS 98.

Replication of Reilly *et al* 1990.

Table 1 Comparison of descriptive results from Reilly et al (1995) and those from the present study

Variables	Sample mean in Reilly et.al. (1995)	(N)	Sample mean in our sample	(N)
Constant	1.000		1.000	
Log(Size)	5.592		5.601	
Percentage union	64.2		63.9	
Percentage female	24.5		19.5	
Percentage manual	69.7		68.7	
Health and safety variables				
HS1	0.264	114	0.255	111
HS2	0.231	100	0.227	99
HS3	0.141	61	0.138	60
HS4	0.030	13	0.030	13
HS5	0.030	13	0.027	12
HS6	0.041	18	0.041	18
HS7	0.107	46	0.112	49
HS8	0.156	67	0.170	74
Two digit industries		432		436
Manufacturing nec	0.032	14	0.002	1
Metal manufacturing	0.044	19	0.048	21
Non-Metallic Minerals	0.051	22	0.048	21
Chemical and Man-Made Fibres	0.067	29	0.073	32
Other Metal Goods	0.060	26	0.061	27
Mechanical Engineering	0.139	60	0.151	66
Office Machinery	0.042	18	0.014	6
Electronic Engineering	0.095	41	0.128	56
Motor Vehicles	0.037	16	0.034	15
Other Transport	0.037	16	0.041	18
Instrument Engineering	0.023	10	0.023	10
Food, Drink and Tobacco	0.099	43	0.099	43
Textiles	0.030	13	0.025	11
Leather Goods	0.002	1	0.002	1
Footwear and Clothing	0.065	28	0.067	29
Paper, Printing etc.	0.079	34	0.080	35
Timber and Furniture	0.032	14	0.039	17
Rubber and Plastics	0.055	24	0.057	25
Other Manufacturing	0.009	4	0.005	2
Regions				
North	0.127	55	0.076	33
North-West	0.104	45	0.138	60
Yorks. And Humberside	0.139	60	0.103	45
West Midlands	0.106	46	0.133	58
East Midlands	0.037	16	0.103	45
East Anglia	0.076	33	0.034	14
South-West	0.132	57	0.076	33
South-East	0.053	23	0.135	59
London	0.049	21	0.056	24
Wales	0.074	32	0.046	20
Scotland	0.102	44	0.103	45
# of establishments	432		436	

Table 2

Parameter estimates.

<i>Variables</i>	<i>Coefficient estimates (standard errors); of Cox model; in Reilly et.al. (1995)</i>		<i>Coefficient estimates (standard errors); of Cox model; using our sample observations</i>	
Constant	-4.608 ^c	(0.521)	-3.747 ⁰	(0.442)
Log(Size)	-0.174 ^c	(0.059)	-0.305 ⁰	(0.044)
Percentage union	0.001	(0.002)	-0.116	(0.126)
Percentage female	-0.006 ^c	(0.004)	-0.591 ²	(0.245)
Percentage manual	0.016 ^c	(0.004)	0.526 ⁵	(0.273)
<i>Health and safety variables</i>				
HS1	-0.730 ^c	(0.261)	-0.119	(0.153)
HS2	-0.378	(0.249)	-0.062	(0.143)
HS3	-0.591 ^c	(0.249)	-0.211	(0.139)
HS4	-0.395	(0.349)	-0.127	(0.302)
HS5	-1.346 ^c	(0.474)	-0.595 ⁵	(0.296)
HS6	-0.366	(0.375)	-0.202	(0.197)
HS7	-0.406	(0.279)	0.151	(0.110)
HS8	Reference	Group	Reference	Group
<i>Two digit industries</i>				
Manufacturing nec	-0.529	(0.462)	-0.223	(0.998)
Metal manufacturing	-0.138	(0.307)	-0.149	(0.248)
Non-Metallic Minerals	-0.320	(0.318)	-0.101	(0.218)
Chemical and Man-Made Fibres	Reference	Group	Reference	Group
Other Metal Goods	0.127	(0.293)	0.003	(0.210)
Mechanical Engineering	-0.578 ^c	(0.250)	0.265	(0.180)
Office Machinery	-0.030	(0.280)	-1.184	(0.811)
Electronic Engineering	-0.359	(0.257)	0.005	(0.203)
Motor Vehicles	-0.465	(0.298)	-0.316	(0.301)
Other Transport	-0.910 ^c	(0.256)	0.008	(0.264)
Instrument Engineering	-0.349	(0.467)	0.372	(0.272)
Food, Drink and Tobacco	-0.592 ^c	(0.259)	-0.007	(0.223)
Textiles	-0.071	(0.390)	0.205	(0.252)
Leather Goods	-1.042	(1.770)	-0.272	(0.961)
Footwear and Clothing	-1.145 ^c	(0.434)	-0.652 ²	(0.286)
Paper, Printing etc.	-0.443	(0.302)	-0.234	(0.218)
Timber and Furniture	-0.933 ^c	(0.312)	0.861 ⁰	(0.194)
Rubber and Plastics	-0.212	(0.300)	-0.151	(0.210)
Other Manufacturing	-0.399	(0.775)	0.346	(0.541)
<i>Regions</i>				
North	1.250 ^c	(0.258)	0.790 ²	(0.347)
North-West	0.388	(0.273)	0.792 ²	(0.338)
Yorks. and Humberside	0.500 ^c	(0.258)	0.725 ³	(0.338)
West Midlands	0.200	(0.267)	0.761 ²	(0.335)
East Midlands	-0.218	(0.383)	0.235	(0.353)
East Anglia	Reference group		Reference group	
South-West	0.321	(0.276)	0.345	(0.350)
South-East	0.670 ^c	(0.314)	0.305	(0.339)
London	-0.692 ^c	(0.323)	0.309	(0.366)
Wales	0.362	(0.263)	1.103 ¹	(0.347)
Scotland	0.711 ^c	(0.258)	0.291	(0.353)
# of establishments	432		436	

Note: c = statistical significance at the 5% level or better using two-tailed tests reported in Reilly et.al. (1995).

Table 3

The Simplified 1990 Model

Parameter	Coefficient Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	-3.9124	0.4178	87.6927	<.0001
Lsize	-0.3189	0.0391	66.4684	<.0001
%union	-0.1636	0.1015	2.5981	0.1070
%female	-1.1215	0.1920	34.1244	<.0001
%manual	0.5034	0.2377	4.4841	0.0342
HS17	-0.1651	0.0892	3.4294	0.0640
onedig3	0.2134	0.1066	4.0082	0.0453
onedig4	0.2404	0.1146	4.3991	0.0360
region1	1.1671	0.3344	12.1832	0.0005
region2	1.0674	0.3254	10.7588	0.0010
region3	1.1647	0.3259	12.7709	0.0004
region4	0.9849	0.3243	9.2231	0.0024
region5	0.4277	0.3420	1.5638	0.2111
region7	0.7225	0.3380	4.5699	0.0325
region8	0.5654	0.3292	2.9493	0.0859
region9	0.6091	0.3554	2.9376	0.0865
region10	1.4295	0.3374	17.9525	<.0001
region11	0.6325	0.3416	3.4290	0.0641

Extending the method to WERS 1998

Table 4 Descriptive results and parameter estimates from WERS 98
(private manufacturing)

<i>Variables</i>	<i>Sample mean in (N) our sample</i>	<i>Coefficient estimates</i>	<i>(standard errors)of Cox modelusing our sample observations</i>
Constant	1.000	-2.685 ⁰	(0. 233)
Log(Size)	5.168	-0.444 ⁰	(0.030)
Percentage union	33.2	-0.062	(0.138)
Percentage female	27.9	0.361 ⁴	(0.178)
Percentage manual	65.9	1.486 ⁰	(0.189)
<i>Health and safety variables</i>			
HS1	0.093	0.448 ¹	(0.162)
HS2	0.103	0.473 ⁰	(0.141)
HS3	0.409	0.361 ⁰	(0.139)
HS4	0.003	-0.371	(1.099)
HS5	0.007	-0.163	(0.471)
HS6	0.079	0.615 ⁰	(0.126)
HS7	0.165	-0.055	(0.113)
HS8	0.141	Reference Group	
<i>Two digit industries</i>			
Food prod. beverages	0.113	-0.167	(0.139)
Textile and text. prod.	0.065	-0.938 ⁰	(0.183)
Leather and leather prod.	0.038	-0.610 ⁰	(0. 187)
Wood and wood prod	0.003	-2.167 ¹¹	(1.350)
Pulp, paper, publishing and printing	0.086	-0.850 ¹	(0.162)
Coke, refined petroleum	0.003	-2.291 ¹	(0.818)
Chemicals and chemical prod.	0.079	-0.587 ⁰	(0.155)
Rubber and plastic prod.	0.055	0.959 ⁰	(0.130)
Other non-metallic miner.	0.038	-0.896 ⁰	(0.234)
Basic metals and fabricated	0.103	0.348 ¹	(0.124)
Machinery and equipment	0.079	-0. 235 ⁹	(0.140)
Electrical and optical equip.	0.165	-0.732 ⁰	(0.138)
Transport equipment	0.072	-0.038	(0.140)
Manufacturing nec.	0.024	Reference Group	
<i>Regions</i>			
North	0.034	-0.931 ⁰	(0.149)
North-West	0.096	-0.369 ¹	(0.134)
Yorks. and Humberside	0.041	-0.220	(0.220)
West Midlands	0.079	0.351 ⁰	(0.125)
East Midlands	0.110	-0. 354 ¹	(0.131)
East Anglia	0.120	Reference group	
South-West	0.161	-0.274 ²	(0.121)
South-East	0.100	0.285 ²	(0.124)
London	0.048	-1.004 ⁰	(0.206)
Wales	0.113	-0.571 ⁰	(0.126)
Scotland	0.093	-0.503 ⁰	(0.141)
# of establishments	291	291	

Table 5 The Cox Corrected Logistic Estimates for WERS 98 Using Amalgamated Groups of Variables

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.7838	0.2145	168.3794	<.0001
lsize	1	-0.3545	0.0240	218.6723	<.0001
perunio	1	-0.6113	0.1158	27.8843	<.0001
perfema	1	-0.4312	0.1475	8.5419	0.0035
permanu	1	1.6429	0.1777	85.4355	<.0001
HS17	1	-0.0473	0.0828	0.3257	0.5682
onedig3	1	-0.2988	0.0765	15.2591	<.0001
onedig4	1	-0.0755	0.0713	1.1208	0.2897
sreg1	1	-0.7456	0.2447	9.2865	0.0023
sreg2	1	-0.3079	0.1296	5.6440	0.0175
sreg3	1	-0.3202	0.2065	2.4031	0.1211
sreg4	1	0.6277	0.1192	27.7399	<.0001
sreg5	1	-0.1134	0.1276	0.7900	0.3741
sreg7	1	-0.0711	0.1178	0.3645	0.5460
sreg8	1	0.3017	0.1196	6.3615	0.0117
sreg9	1	-0.7956	0.2028	15.3948	<.0001
sreg10	1	-0.1925	0.1179	2.6668	0.1025
sreg11	1	-0.3657	0.1355	7.2855	0.0070

FURTHER NOTES ON ASSUMPTIONS, DEFINITIONS AND DESCRIPTIVE STATISTICS USED IN THE ANALYSIS OF THE WIRS/WERS DATA SETS.

The analysis presented in Chapter 3 has at its core a replication study. Our experience in conducting it has led us to believe that the following details of assumptions definitions and descriptive statistics are necessary if we are to open our own work to critical examination.

(1) Assumptions Made in Obtaining a Sample Similar to the One Used in Reilly et.al. (1995) from WIRS3

The following assumptions were made for the formulation of variables used in Reilly, Paci and Holl (1995).

1. Values equal or greater than 9997 are set equal to missing values for the variables:
 - NOI1Y If P3 Any types of injury (1=Yes, 2=No injuries) is greater than 2.
 - P4 Taken together, how many of these injuries have occurred at this establishment in the past year?
 - MANFTUN Full-time manual workers who are in a union
 - TOTEMP Total employment
 - TOTEMP1Y Total employment last year
 - MANFT Full-time manual workers

2. Values equal to zeroes or equal or greater than 9997 are set equal to zeroes for the variables:
 - MANFUSK Female unskilled manual workers
 - MANFSSK Female semi-skilled manual workers
 - MANFSK Female skilled manual workers
 - MANTUSK Total unskilled manual workers
 - MANTSSK Total semi-skilled manual workers
 - MANTSK Total skilled manual workers

3. If there were injuries in the establishment last year and if last year's total employment numbers are missing then TOTEMP1Y is put equal to TOTEMP.

4. Five values of MANFTUN, which were greater than values of MANFT, are corrected by equalisation.

Deleted observations

All missing values of the variables above are deleted from the data set and there were a total of 467 observations for private manufacturing industry left in the analysis. There were some partial missing values for the series used in the regressions, so the total number of observations in the models decreased to 436.

(2) Assumptions Made in Obtaining a Sample Similar to the One Used in Reilly et.al. (1995) from WERS 1998.

The following assumptions were made for the formulation of variables used in

Reilly, Paci and Holl (1995).

1. if $\text{totemp1y}=0$ then $\text{totemp1y}=\text{.}$
2. if $\text{perunio}=\text{.}$ then $\text{perunio}=0$

2.2. Filtering

Three data files were merged for the analysis. These are *mq98fin* (2191), *wrq98* (918) and *region* (2191). After merging the files, the following filter was used to choose the observations: $1 \leq \text{astatus} \leq 2$.

(3) Descriptive results and model estimations

The table below reports definitions and descriptive statistics of the variables from WERS 1998 to compare with Reilly et. al. (1995).

Table 6 Variable Label

SERNO	Serial number
EST_WT	Establishment weight, based to 2,191 observations
GROSSWT	Establishment weight, based to population of GB workplaces with 10 or more employees
EMP_WT	Employee weight
noi1y	Number of injuries, last year
totemp1y	Total employment, last year
IR	The total number of employees who have sustained a listed injury in the last 12 months divided by total number of establishment employees
lsize	Log (number of employees)
perunio	The percentage of full-time manual workers who are in a union
perfema	The percentage of total establishment employees who are women
permanu	The percentage of total establishment employees who are manual (unskilled, semi-skilled or skilled workers)
ind1	Manufacturing industry
ind2	Electricity gas and water
ind3	Construction industry
ind4	Wholesale and retail trade
ind5	Hotel and restaurant industry
ind6	Transport, storage and communication industry
ind7	Financial intermediation industry
ind8	Real estate, renting and business activities
ind9	Public administration and defense
ind10	Education
ind11	Health and social work
ind12	Other community, social and personal service activities
man1	Manufacture of food products, beverages and tobacco
man2	Manufacture of textiles and textile products
man3	Manufacture of leather and leather products
man4	Manufacture of wood and wood products
man5	Manufacture of pulp, paper products publishing and printing
man6	Manufacture of coke, refined petroleum products and nuclear fuel
man7	Manufacture of chemicals and chemical products
man8	Manufacture of rubber and plastic products
man9	Manufacture of other non-metallic mineral products
man10	Manufacture of basic metals and fabricated metal products
man11	Manufacture of machinery and equipment not elsewhere classified
man12	Manufacture of electrical and optical equipment
man13	Manufacture of transport equipment
man14	Manufacturing not elsewhere classified
sreg1	North
sreg2	North-West
sreg3	Yorks and Humberside
sreg4	West Midlands
sreg5	East Midlands

sreg6 East Anglia
sreg7 South-West
sreg8 South-East
sreg9 London
sreg10 Wales
sreg11 Scotland
aveanpay Average annual pay
HS1 Health and Safety Committee 1 as in Reilly et.al (1995)
HS2 Health and Safety Committee 2 as in Reilly et.al (1995)
HS3 Health and Safety Committee 3 as in Reilly et.al (1995)
HS4 Health and Safety Committee 4 as in Reilly et.al (1995)
HS5 Health and Safety Committee 5 as in Reilly et.al (1995)
HS6 Health and Safety Committee 6 as in Reilly et.al (1995)
HS7 Health and Safety Committee 7 as in Reilly et.al (1995)
HS8 Health and Safety Committee 8 as in Reilly et.al (1995)
HS16 Health and Safety Committee HS1-6 as in Reilly et.al (1995)
HS17 Health and Safety Committee HS1-7 as in Reilly et.al (1995)
HS161 Health and Safety Committee HS1,2,4,5 as in Reilly et.al (1995)
HS162 Health and Safety Committee HS3,6 as in Reilly et.al (1995)

Table 7 Variable definitions.

Variable	N	N Miss	Minimum	Mean	Maximum	Std Dev
SERNO	291	0	11003.00	12767.09	14457.00	870.6543771
EST_WT	291	0	0.0717760	1.1400361	18.6862021	2.0119072
GROSSWT	291	0	4.6013343	113.4650287	1197.91	212.0943836
EMP_WT	291	0	0.2218259	1.6600071	31.0842062	2.5874866
noily	291	0	0	3.7869416	200.0000000	14.9883622
totempl	288	3	9.0000000	418.1979167	15471.00	1151.04
IR	288	3	0	0.0144597	0.3174603	0.0366844
lsize	288	3	2.1972246	5.1677972	9.6467226	1.2334339
perunio	291	0	0	0.3318498	0.9803922	0.3357386
perfema	291	0	0	0.2789717	0.9111111	0.2139051
permanu	291	0	0	0.6585386	0.9818182	0.2223360
ind1	291	0	1.0000000	1.0000000	1.0000000	0
ind2	291	0	0	0	0	0
ind3	291	0	0	0	0	0
ind4	291	0	0	0	0	0
ind5	291	0	0	0	0	0
ind6	291	0	0	0	0	0
ind7	291	0	0	0	0	0
ind8	291	0	0	0	0	0
ind9	291	0	0	0	0	0
ind10	291	0	0	0	0	0
ind11	291	0	0	0	0	0
ind12	291	0	0	0	0	0
man1	291	0	0	0.1134021	1.0000000	0.3176299
man2	291	0	0	0.0652921	1.0000000	0.2474661
man3	291	0	0	0.0378007	1.0000000	0.1910424
man4	291	0	0	0.0034364	1.0000000	0.0586210
man5	291	0	0	0.0859107	1.0000000	0.2807148
man6	291	0	0	0.0034364	1.0000000	0.0586210
man7	291	0	0	0.0790378	1.0000000	0.2702625
man8	291	0	0	0.0549828	1.0000000	0.2283394
man9	291	0	0	0.0378007	1.0000000	0.1910424
man10	291	0	0	0.1030928	1.0000000	0.3046038
man11	291	0	0	0.0790378	1.0000000	0.2702625
man12	291	0	0	0.1649485	1.0000000	0.3717734
man13	291	0	0	0.0721649	1.0000000	0.2592066
man14	291	0	0	0.0240550	1.0000000	0.1534839
sreg1	291	0	0	0.0343643	1.0000000	0.1824768
sreg2	291	0	0	0.0962199	1.0000000	0.2954006
sreg3	291	0	0	0.0412371	1.0000000	0.1991807
sreg4	291	0	0	0.0790378	1.0000000	0.2702625
sreg5	291	0	0	0.1099656	1.0000000	0.3133858
sreg6	291	0	0	0.1202749	1.0000000	0.3258431
sreg7	291	0	0	0.1615120	1.0000000	0.3686365
sreg8	291	0	0	0.0996564	1.0000000	0.3000573
sreg9	291	0	0	0.0481100	1.0000000	0.2143672
sreg10	291	0	0	0.1134021	1.0000000	0.3176299
sreg11	291	0	0	0.0927835	1.0000000	0.2906286
aveanpay	291	0	0	0.0656761	3.0239330	0.2158481
HS1	291	0	0	1.0000000	0.0927835	0.2906286
HS2	291	0	0	1.0000000	0.1030928	0.3046038
HS3	291	0	0	1.0000000	0.4089347	0.4924841
HS4	291	0	0	1.0000000	0.0034364	0.0586210
HS5	291	0	0	1.0000000	0.0068729	0.0827596
HS6	291	0	0	1.0000000	0.0790378	0.2702625
HS7	291	0	0	1.0000000	0.1649485	0.3717734
HS8	291	0	0	1.0000000	0.1408935	0.3485110
HS16	291	0	0	1.0000000	0.6941581	0.4615568
HS17	291	0	0	1.0000000	0.8591065	0.3485110
HS161	291	0	0	1.0000000	0.2061856	0.4052622
HS162	291	0	0	1.0000000	0.4879725	0.5007164

APPENDIX 2: METHODOLOGICAL NOTE AND QUESTIONNAIRE

1 METHODS

Questionnaires were distributed to workers and collected during a series of visits to the establishments. Ideally, this was undertaken by the researchers during workers' rest breaks at a common location such as a canteen/rest facility. Equally ideal, for the purpose of distribution and collection, was the practice of distributing and collecting questionnaires during training/briefing sessions for workers organised by management that occurred in a few cases. For various reasons however — absence of such facilities, scattered workforce, time constraints and so on, — it was not possible to do so in all cases and in several cases questionnaires were returned through various collection points or by the managers who had undertaken to supervise their distribution. Generally the lower response rates were found in such cases.

Interviews were undertaken with managers, health and safety specialists, health and safety representatives and a selection of workers themselves. Numbers of interviews conducted varied between firms in relation to their size and the complexity of the arrangements for OHS management and worker representation.

Face to face interviews were followed-up with further telephone contacts, repeat interviews and requests for various documentation of health and safety procedures practices and outcomes. Researchers took part in health and safety committee meetings as observers wherever this was possible. Information was also sought where necessary from senior personnel elsewhere in the company, from HSE inspectors and trade union officials outside the companies where necessary. Documentary evidence was sought from managers concerning health and safety policy and arrangements, injury and incident reporting as well as labour force statistics.

The details of numbers of questionnaires distributed response rates and personnel interviewed are summarised in Tables A 1 and A 2

Table A 1 Chemicals

<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
No of workers	116	47	784	451	268
No of questionnaires issued	80	46	650	433	268
No of questionnaires completed	55	23	396	358	101
% response rate	69	50	61	83	38

The response rate for the completion of questionnaires was generally good with four of the five establishments in chemicals around 50 per cent or above. In Plant 5, in chemicals, the questionnaires were made available throughout the factory, and given to production crews on their return-to-work training day following a 17-day break. Time constraints prevented crews being given time away from work to complete the questionnaires. This helps to explain why the response rate is lower in this plant and it also meant that manual workers were under represented in the responses from the plant.

In construction the distribution of work both in terms of sites and employers as considerably more complex than in chemicals. As far as worksites were concerned, the five case studies ranged from large multiple contractor metropolitan commercial building developments, to small scale maintenance and repair work involving single work gangs. The range of sites visited is summarised below:

- **Case study 1** — The questionnaire was distributed amongst 6 small to medium-sized building sites with between approximately 20 to 60 workers operated by a large, regionally organised national construction company as the principal contractor. One of these sites was selected as being representative for the purposes of detailed interviews.
- **Case study 2** — This was a small construction company with approximately 110 core staff that used a large number of subcontracting companies to undertake its regionally based building projects. Two construction sites at which it was the principal contractor were the subjects of detailed investigation in the case studies. The questionnaire was issued to all the company's employees and additionally to 10 employees of a subcontractor at one of the sites investigated.
- **Case study 3** — A large national construction engineering company servicing the water utilities sector. The company operated with a large degree of regional autonomy and the questionnaire was distributed at two of the sites of one of its regional organisations. These sites were also the subjects of the detailed investigation.
- **Case study 4** — A small subcontracting company operating as one of many subcontracting firms on a large metropolitan commercial building development. It was involved in five separate building projects at the large site.
- **Case study 5** — A large multinational construction company operating as the principal contractor at a second large metropolitan commercial building development. There were approximately 50 of its direct employees on-site. The remainder of the 500 or so workers that could be on-site at any one time were employees of sub-contractors. The questionnaire was distributed across the full range of these workers. Interviews were conducted with both the management and employees of the principal contractor as well as with those of sub-contractors.

Since it was important to consider the effects of the fragmentation of employment relationships at worksites on worker representation and consultation on health and safety, where possible as indicated above, questionnaires were distributed amongst employees of sub-contractors as well as amongst those of the principal contractors.

Response rates are presented in Table A2

Table A 2 Construction

<i>Case study</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
No of workers	246	110	68	62	500
No of questionnaires issued	246	110	68	50	200
No of questionnaires completed	179	51	68	33	88
% response rate	73	46	100	66	44

HEALTH AND SAFETY PERFORMANCE AT WORK

***A research project commissioned by the Health
and Safety Executive***

This research has been commissioned by the Health and Safety Executive, and is being carried out jointly by South Bank University and Cardiff University.

This questionnaire is designed to provide information about health and safety in your workplace. It is part of a larger survey. All information is collected on a confidential and anonymous basis.



About your working conditions

1. On the whole, how do you feel about your **working conditions**?

✓ For each of the categories, place a tick in the most appropriate box

Very satisfied	Fairly satisfied	Not very satisfied	Not at all satisfied
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Physical conditions

Use the following scale to indicate whether you are exposed to any of the following at work:

✓ For each of the categories, place a tick in the most appropriate box

	All the time	Around 75% of the time	Around 50% of the time	Around 25% of the time	Never	Don't know
Noise or vibration	<input type="checkbox"/>					
Poor lighting	<input type="checkbox"/>					
Overcrowding	<input type="checkbox"/>					
Extremes of temperature	<input type="checkbox"/>					
Toxic fumes, chemicals, dusts and substances	<input type="checkbox"/>					
Dangerous machinery and equipment	<input type="checkbox"/>					
Badly designed equipment and workstations	<input type="checkbox"/>					
Radiation	<input type="checkbox"/>					
Badly designed and located display screen equipment	<input type="checkbox"/>					
Working at heights	<input type="checkbox"/>					
Dangers from workplace transport	<input type="checkbox"/>					
Inadequate personal protective clothing	<input type="checkbox"/>					
Other – please state and place a tick in the most appropriate box	<input type="checkbox"/>					

3. Job design, relationships and work organisation

Use the following scale to indicate whether you are exposed to any of the following at work:

✓ For each of the categories, place a tick in the most appropriate box

	All the time	Around 75% of the time	Around 50% of the time	Around 25% of the time	Never	Don't know
Overwork	<input type="checkbox"/>					
Repetitive work	<input type="checkbox"/>					
Carrying or moving heavy loads	<input type="checkbox"/>					
Lack of job control because of machines or technology	<input type="checkbox"/>					
Lack of job control because of clients or customers	<input type="checkbox"/>					
Time pressures	<input type="checkbox"/>					
Unsympathetic supervisors or managers	<input type="checkbox"/>					
Sexual harassment	<input type="checkbox"/>					
Racial harassment	<input type="checkbox"/>					
Lone working	<input type="checkbox"/>					
Understaffing	<input type="checkbox"/>					
Unsocial working hours	<input type="checkbox"/>					
Potential threatening behaviour from customers/clients/colleagues	<input type="checkbox"/>					
Being treated with a lack of dignity	<input type="checkbox"/>					
Other – please state and place a tick in the most appropriate box	<input type="checkbox"/>					

4. Working time

Use the following scale to indicate your feelings about your working time arrangements

✓ For each of the categories, place a tick in the most appropriate box

	Very good	Good	Satisfactory	Poor	Not applicable
Length of your working week	<input type="checkbox"/>				
Shift working	<input type="checkbox"/>				
Rest periods between work	<input type="checkbox"/>				
Rest breaks at work	<input type="checkbox"/>				
Paid annual leave	<input type="checkbox"/>				
Paid time off to care for family and dependents	<input type="checkbox"/>				
Other – please state and place a tick in the most appropriate box	<input type="checkbox"/>				

5. Welfare facilities

Using the following scale, indicate your feelings about the welfare facilities at work

✓ For each of the categories, place a tick in the most appropriate box

	Very good	Good	Satisfactory	Poor	Not applicable
Toilets	<input type="checkbox"/>				
Washing facilities	<input type="checkbox"/>				
Provision of drinking water	<input type="checkbox"/>				
A safe place for your clothing and possessions	<input type="checkbox"/>				
Facilities for changing clothing	<input type="checkbox"/>				
Rest facilities	<input type="checkbox"/>				
Facilities for pregnant women or nursing mothers	<input type="checkbox"/>				
Facilities for eating meals	<input type="checkbox"/>				
Other – please state and place a tick in the most appropriate box	<input type="checkbox"/>				

Injuries and ill health

6. In the last 12 months, have you suffered a work-related injury or incident of work-related ill health and **also** reported it to your employer?

Yes No

7. In the last 12 months, have you suffered a work-related injury or incident of work-related ill health and **not** reported it to your employer?

Yes No

8. Do you think that your health and safety is at risk because of your work?

Yes No Don't Know

9. Do you think that your work is **good** for your health?

Yes No

10. Do you think that your work is **bad** for your health?

Yes No

If you do not think that your work is bad for your health, proceed to Question 12

11. If you think that work is bad for your health, tick the boxes below to show in what respect:

Hearing problems

Problems with my vision

Skin problems

Allergies

Asthma

Headaches

Muscular problems/pains in the shoulder, neck or back

Muscular problems/pains in arms, legs or feet

Respiratory problems/difficulties with breathing

Stress

Overall fatigue

Sleeping problems

Heart disease

Other – please state and place a tick in the most appropriate box

	Around	Around	Around	Don't	
	75% of	50% of	25% of	Never	know
	All the	the time	the time	the time	
	time				
	<input type="checkbox"/>				

12. In the last twelve months, what is the approximate number of days that you were absent from work? _____ days

If you were not absent from work in the last twelve months, go to Question 14

13. Approximately, how many of these days were due to:
Specific injuries caused by work _____ days?

Health problems caused by work _____ days?

Management arrangements for health and safety

14. Do you know whether management does the following:
- a) Produces a written health and safety policy?
 Yes No Don't Know
- b) Conducts risk assessments?
 Yes No Don't Know
- c) Keeps written records of risk assessments?
 Yes No Don't Know
- d) Has procedures for reporting work-related accidents and ill health?
 Yes No Don't Know
- e) Has procedures for monitoring workers' health?
 Yes No Don't Know

15. How well informed are you by management about the risks resulting from your job?
- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very well Informed | Quite well informed | Quite badly informed | Very badly informed | Don't Know |
| <input type="checkbox"/> |

16. How helpful do you find the following in keeping up to date about health and safety in your workplace? **For each of the categories, place a tick in the most appropriate box**
- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Very helpful | Helpful | Not very helpful | Not at all helpful | Not used here |
| Company notice boards | <input type="checkbox"/> |
| Manager or supervisor talking to you | <input type="checkbox"/> |
| Company e-mail | <input type="checkbox"/> |
| Company newsletter | <input type="checkbox"/> |
| Formal meetings between managers and workers | <input type="checkbox"/> |

17. How often are you or others working here asked by managers for your views on any of the following? **For each of the categories, place a tick in the most appropriate box .**
- | | | | | |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Frequently | Sometimes | Hardly ever | Never |
| Future plans for the workplace | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Staffing issues, including redundancy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Changes to work practices | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pay issues | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Health and safety at work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

18. Has management consulted you or others about their:
- a) Written health and safety policy?

- Yes No Don't Know
- b) Risk assessments?
 Yes No Don't Know
- c) Written records of risk assessments?
 Yes No Don't Know
- d) Procedures for reporting work-related accidents and ill health?
 Yes No Don't Know
- e) Procedures for monitoring workers' health?
 Yes No Don't Know

19. How good would you say managers here are at the following health and safety matters? **For each of the categories, place a tick in the most appropriate box**
- Keeping everyone up to date on proposed changes about health and safety

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

- Providing everyone with the chance to comment on proposed changes that affect health and safety
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

- Responding to suggestions from workers about health and safety
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

- Dealing with health and safety problems that you or others may have
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

20. How good would you say managers here are at the following general employment matters? **For each of the categories, place a tick in the most appropriate box**

- Keeping everyone up to date about proposed changes
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

- Providing everyone with the chance to comment on proposed changes
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

- Responding to suggestions from workers
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very good | Good | Neither good nor poor | Poor | Very poor | Don't know |
| <input type="checkbox"/> |

Dealing with work problems that you or others may have

Very good Good Neither good nor poor Poor Very poor Don't know

21. In general, how would you describe relations between managers and workers here?

Very good Good Neither good nor poor Poor Very poor Don't know

22. Overall, how effective do you think your employer is at managing health and safety conditions?

Very effective Reasonably effective Not effective Don't know

Training

23. During the last 12 months, how much health and safety training have you had, either paid for or organised by your employer? (Include only training away from your normal place of work, but it could be on or off the premises)

- None
- Less than 1 day
- 1 to less than 2 days
- 2 to less than 5 days
- 5 to less than 10 days
- 10 days or more

24. During the last 12 months, how much other training have you had, either paid for or organised by your employer? (Include only training away from your normal place of work, but it could be on or off the premises)

- None
- Less than 1 day
- 1 to less than 2 days
- 2 to less than 5 days
- 5 to less than 10 days
- 10 days or more

If you have not had health and safety training in the last 12 months, proceed to Question 26

25. If you received health and safety training in the last 12 months how useful was it?

- Very useful
- Quite useful
- Not useful

26. Have you ever attended a health and safety induction organised by your employer?

- Yes
- No
- Don't Know

If you have not attended a health and safety induction, proceed to Question 28

27. How useful was the health and safety induction training?

- Very useful
- Quite useful
- Not useful

Health and safety committee

28. Do you think that a health and safety committee is a good idea?

- Yes
- No
- Don't Know

29. Do you have a health & safety committee at your workplace?

- Yes
- No
- Don't Know

If you do not have a health and safety committee at your workplace, proceed to Question 32

30. How effective do you think the health and safety committee is in representing your interests?

Very effective Reasonably effective Not effective Don't know

31. How effective do you think the health and safety committee is at consulting with you and providing you with health and safety information

Very effective Reasonably effective Not effective Don't know

And now some questions about health and safety representatives

32. Do you think that health and safety representatives are a good idea?

- Yes
- No
- Don't Know

33. Do you have a health and safety representative to represent you and other workers at your workplace?

- Yes
- No
- Don't Know

If you do not have a health and safety representative in your workplace, go to Question 40

34. If you do have a health and safety representative to represent you and other workers at your workplace, do you know her or his name?

- Yes
- No

35. Is this person a trade union representative?

- Yes
- No
- Don't Know

36. How effective do you think your health & safety representative is at representing your interests?

Very effective Reasonably effective Not effective

37. How effective do you think your health & safety representative is at providing you with health and safety information?

Very effective Reasonably effective Not effective

38. How effective do you think your health and safety representative is at consulting with you on health and safety matters?

Very effective Reasonably effective Not effective

39. How helpful do you find the following in keeping up to date about health and safety in your workplace? For each of the categories, place a tick in the appropriate box

Very helpful Helpful Not very helpful Not at all helpful Not used here

Notice boards used by health and safety representatives

Health and safety representative talking to you

Health and safety representative's e-mail

Newsletters used by health and safety representatives

Meetings organised by health and safety representatives

Dealing with health and safety problems

40. If you were worried about a health and safety problem at work, who would you talk to about this first?

✓ **Tick one box only**

- A fellow worker
- A trade union health and safety representative
- A union representative who is not specifically a health and safety representative
- A non union health and safety representative
- A supervisor
- A manager
- A member of the safety committee
- A trade union outside the workplace
- A health and safety inspector
- A Law Centre, Citizens Advice Bureau or similar
- Other (if so, who?) _____

Don't know

41. In your experience, who do you think would be the most likely to ensure that a health and safety problem at work is resolved satisfactorily? ✓ **Tick one box only**

- A fellow worker
- A trade union health and safety representative
- A union representative who is not specifically a health and safety representative
- A non union health and safety representative
- A supervisor
- A manager
- A member of the safety committee
- A trade union outside the workplace
- A health and safety inspector
- A Law Centre, Citizens Advice Bureau or similar
- Other (if so, who?) _____
- Don't know

And finally about you

42. Are you? Male Female

43. To which of these groups do you consider you belong? ✓ **Tick one box only**

- Black Carribean
- Black African
- Black Other
- Indian
- Pakistani
- Bangladeshi
- Chinese
- White
- Another ethnic group

44. How old are you? _____ years

45. Do you work? Full-time Part-time

46. Are you? Temporary Permanent

47. What sort of work do you do?

- Manual
- Services
- Professional/technical
- Clerical
- Managerial
- Other

48. What is your job? _____

49. How long have you worked for your employer? _____ years

50. Who do you work for?

- The main employer at the workplace
- A contractor or sub-contractor
- An agency
- Other

51. Are you a member of a trade union? Yes No

If you are a member of a trade union, which union do you belong to?

Thank you for your co-operation. We would be pleased to have any additional comments that you have overleaf.

Additional comments



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