ANDREW HOPKINS

Making Safety Work

GETTING MANAGEMENT COMMITMENT TO OCCUPATIONAL HEALTH AND SAFETY

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Preface

Government authorities are increasingly using the argument that 'safety is profitable' in order to interest employers in improving workplace health and safety. Doubt about the effectiveness of this strategy is what prompted this book.

Arguing that 'safety pays' is by no means the only government strategy. Considerable effort is also made to ensure that employers comply with regulations, the leverage being the threat of prosecution in the event of serious violations. Moreover, the law in all Australian jurisdictions gives workers a role in drawing health and safety matters to the attention of employers.

But since the late 1980s government agencies have stressed that good OHS (occupational health and safety) performance reduces the costs of workers compensation, along with other accident-related costs, and enhances productivity. OHS, they say, is simply good business, and it is in the employer's interest to manage health and safety in much the same way that other aspects of business are managed. Insofar as this argument is accepted it implies a reduced role for government in ensuring worker health and safety. If economic self-interest will do the job then compulsion is unnecessary and intervention by governments can be curtailed. Ultimately there may be no need for State-imposed regulation at all. These arguments are all part of the broader current of thinking which came to prominence in Australia in the 1980s—sometimes described as 'economic rationalism'.

The big question is: how well does this strategy work? How effective are these cost arguments? The thesis of this book is that

they are often not the most effective way of gaining management attention. What most impresses managers is the threat that they might be personally prosecuted in the event of some serious health or safety failure. The implication of this argument is that the authorities must maintain a vigorous enforcement program which involves a credible threat of prosecution, and must resist any suggestion that they rely primarily on the economic interests of employers to do the job of ensuring worker health and safety. This book, then, may be read as a critique of economic rationalist thinking in the area of occupational health and safety.

Outline of the book

One assumption which underlies the preceding discussion is that OHS is the responsibility of management rather than workers. While OHS professionals and many employers accept this assumption, it is nevertheless controversial. Chapter 1 aims to justify this approach and offers a critique of the alternative, blame-the-worker approach. It argues that focussing on the system of work, for which management is responsible, is more effective than holding workers responsible for the injuries and illness which befall them.

Chapter 2 deals in a theoretical way with the debate about how best to get management's attention focussed on OHS. Drawing partly on the important book by Amitai Etzioni, *The Moral Dimension*, it offers two main objections to any policy based primarily on economic self-interest. The first is that economic self-interest is not the only nor even the dominant management motive; human beings are moral beings and much human action can be understood only by reference to the actor's beliefs and values. Second, a policy based on economic self-interest assumes that employers act rationally in ways designed to maximise profit. It is well known, however, that managers spend much of their time managing crises rather than focussing on the longer term task of optimising a firm's behaviour. Economic costs which do not draw attention to themselves by generating some kind of crisis are often overlooked by busy managers. The costs of injury and illness can sometimes engage management attention in this way, but the threat of prosecution is far more effective.

Chapter 3 looks in detail at just how managers respond to the costs of compensation. The main argument here is that when managers do become aware of compensation costs their first

response is to implement cost reduction strategies which have nothing to do with improving health and safety. Such strategies include getting the injured back to work earlier and encouraging them to stay at work without taking time off when they suffer minor injuries. These are both very effective ways of cutting compensation costs which do nothing to enhance safety.

Chapter 4 discusses the many circumstances in which health and safety problems do not generate compensation costs and where employers thus have no economic incentive to attend to OHS. For example, occupational illnesses with long onset times, such as cancer, tend not to give rise to compensation claims and so impose no financial pressure on employers. Again, dangerous occurrences, such as gas leakages, may not in fact injure anyone, but if not responded to appropriately have the potential to cause death on some future occasion. Such problems require resolute action by the regulatory authorities in order to protect worker health and safety.

Chapter 5 addresses broader 'safety pays' arguments, for example the suggestion that attention to OHS enhances productivity. It reviews in detail Worksafe's original best practice case studies and finds little evidence in these studies that attention to safety has enhanced productivity. Other evidence suggests that at times safety is actually detrimental to productivity and profit. However, there are commercial pressures for safety operating within the business world; for instance, the requirement that some large companies place on firms with whom they do business to have an OHS management plan. In these circumstances it is certainly economically advantageous for client firms to attend to safety.

Chapter 6 deals with regulation and regulatory inspectorates and shows that inspectorates are very effective in reducing injury and illness. There is thus a strong argument for continued government intervention in the area of OHS, contrary to those who argue for deregulation and a reduced role for inspectorates.

Chapter 7 examines the impact of prosecutions which are often mounted when workers are killed or injured. It argues that these perform a vital function in giving credibility to the regulatory system. There are a number of ways in which the authorities could make these prosecutions more effective. Most importantly, they should give a higher priority to prosecuting company managers and directors, as opposed to companies. Focussing on company officers who are negligent with respect to their duty of care is likely to enhance the impact of these prosecutions dramatically.

Chapter 8 argues that workers and their unions also have a part

to play in directing the attention of their employers to OHS, particularly in the case of health hazards. It is appropriate that governments empower workers by providing them with legislative backing, information and other resources to strengthen their ability to perform this function.

Chapter 9 is the first of two case studies which illustrate some of these ideas. It deals with the construction industry and argues that in this context compensation costs play no part at all in promoting safety. In large project construction it is the union movement, using both its own industrial strength and the resources of the regulatory system, which impacts on management thinking in relation to OHS.

Chapter 10 examines the coal industry in New South Wales where it is often claimed that attention to OHS has resulted in improved productivity. The chapter argues that this claim is essentially false: productivity improvements are due largely to technological change, and the reduction in lost-time injuries which has undoubtedly occurred is primarily a result of claims and injury management strategies and only secondarily a consequence of improved OHS practices leading to fewer injuries. The chapter argues that this industry provides a good example of the importance of regulatory inspectorates in disaster prevention.

Chapters 11 and 12 seek to draw some practical and policy conclusions from the discussion. Chapter 11 argues that OHS specialists within large organisations—safety officers and managers and worker OHS representatives—are especially well placed to draw management attention to OHS. It describes how they can make use of the findings of this study to influence their senior managers.

Chapter 12 deals with what governments and their regulatory agencies might do in the light of the findings of this study. It suggests, among other things, how they might empower OHS specialists within large organisations, enhance the incentive effects of compensation costs and improve the effectiveness of prosecutions.

Chapter 13 provides some concluding comments, reiterates the importance of regulations and their enforcement, and returns briefly to the issue of economic rationalism.

Research details

This book is the outcome of a research project funded in part by a grant from Worksafe Australia, whose support is gratefully

acknowledged. Worksafe, of course, bears no responsibility for the views expressed. Discussions were held with senior managers—if possible the chief executive officer—of more than 25 companies in several Australian states and territories, in an effort to understand what, if anything, focussed their attention on OHS. In most cases interviews were also conducted with OHS managers or others within the organisation with a special interest in OHS. Worker representatives in these organisations were contacted in some cases. In several cases I spoke to as many as four people at different points in the company hierarchy. My thanks go to all those who helped me in this way. The organisations concerned are not identified here, but they range from very large to very small and cover a wide span of industries, among them transport, communications, metal manufacturing, chemicals and petroleum production. Where illustrative material is used in the book without reference it is taken from these discussions. This information is supplemented from a number of other sources, in particular earlier work which I have done on OHS regulatory agencies and on coal mine safety.

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Whose responsibility?

The central question of this book is: how can we best get management to improve its occupational health and safety performance? But before we even begin to consider this question we need to explore the assumption inherent in it, namely that it is management which is responsible for worker health and safety. This is a controversial assumption. Were we to assume that workers are responsible for the illness and injuries which befall them we would be asking instead: how can we best get workers to behave in less risky ways? We need at the outset, therefore, to justify this assumption of managerial responsibility. Such is the purpose of this chapter.

Perspectives on the causes of injury and illness

There are a number of perspectives on the causes of injury and illness which can be classified into two broad types: those which locate the causes in the personal characteristics and behaviour of the workers themselves and those which locate the causes in the wider social, organisational or technological environment. The former type has often been described as 'blaming the victim'; for the sake of symmetry I shall term the latter, somewhat loosely, 'blaming the system'. It is most important to understand that each perspective implies a strategy for combating illness and injury. If, for instance, one sees worker carelessness as the primary cause, then exhortation and education may be the appropriate policy responses. If, however, one notes the close association between

injury and the violation of safety regulations by companies, then prosecution of companies may appear the best strategy. The perspective one chooses to emphasise is thus a matter of considerable practical significance.

Blaming-the-victim approaches

Blaming the victim is a style of explanation to be found across the whole spectrum of human affairs. The rape victim is often blamed for putting herself in a position where she might be raped; while the unemployed are accused of not wanting work. Similarly, a good deal of cancer research is aimed not at discovering environmental causes of cancer but at identifying types of people most likely to contract the disease (Epstein 1978, p. 395). (Although strictly speaking such research implies no blame, it does assume that victim characteristics contribute in some way to the illness.) We have even seen asbestos mining companies trying to shift the blame for the deaths of their workers by arguing that the risk of asbestosis is heightened by smoking, for which workers are responsible. In what follows I shall outline four types of explanation for industrial injuries or illness which essentially blame the victim.

(a) Accident-proneness A great deal of accident research is of the blame-the-victim variety in that it seeks to identify accident-prone individuals (see Bass and Barrett 1972, ch. 15; Nichols 1975, p. 219). Injury statistics are correlated with individual attributes such as age, sex, intelligence and personality in an attempt to discover which types of workers are most prone to injury or illness. The policy which follows from this style of analysis is to deny employment to those prone to illness and injury. As one manager I spoke with said: 'If I could have sacked just two of the workers in this plant when I took over, I could have cut the injury rate in half'. If migrant women are found to be more susceptible than their Australian-born counterparts to RSI, or if it is found that men who wear glasses are more prone to accidents in mines because condensation on their glasses in the moist underground atmosphere obscures their vision (see AIMM 1975, p. 2), employers may want to screen them out. A particularly clear example of this approach was an advertisement placed in the *Financial Review* of 21 September 1981 by an insurance company. It recommended the employment of short stocky men to do lifting work on the principle of: less height, less leverage, fewer back problems.

While the policy of screening out employees at risk may seem

sensible from the point of view of employers, there are many objections to it, of which I shall mention just two. First, those who report the most accidents are not always the most accident-prone. When an investigation was carried out at one hospital of nurses who were reporting the most needlestick injuries, it was found that they were simply the most conscientious reporters. Hospital policy was that all such injuries be reported, but some nurses regarded them as too minor to be bothered filling out the injury notification forms (see also Smith and Wilkinson, 1990).

Second, and more importantly, screening out workers prone to injury or illness is a discriminatory policy which runs the risk of seriously disadvantaging sections of the workforce. Such discrimination is now largely illegal (Johnstone 1993).

(b) The ignorance/carelessness theme A second type of blame-the-victim approach assumes that injuries are a result of carelessness or ignorance on the part of workers. Perhaps the best known example of this can be found in the report of the United Kingdom Committee on Safety and Health at Work, chaired by Lord Robens. Robens found that the most important single reason for accidents at work is apathy or carelessness (Gunningham and Creighton 1979, p. 143). A secondary factor identified by Robens was worker ignorance of correct safety procedures. He concluded that what was needed was policy designed to generate greater interest in and awareness of safety issues among workers. A variant of the ignorance/carelessness theme is to attribute injury to violations of safety regulations by workers. The corresponding strategy is to penalise the violators.

(c) The culture of masculinity A third blame-the-victim approach focuses on the culture of masculinity as an explanation for accidents. It is sometimes suggested that a concern for safety is regarded as effeminate and that workers are forced to do unsafe things by the fear of being labelled as cowards by their workmates (see Fitzpatrick 1974, p. 28). Again, training and education aimed at breaking down this culture will be the obvious response.

(d) Malingering The most dramatic blame-the-victim approach is the suggestion that many injury claims are false or exaggerated and are made so that workers can take time off or extend their time off on workers compensation—recreational compensation as one manager called it (see Chapter 10). We shall return to this analysis in later chapters, but, in principle, any policy which seeks to identify malingerers and penalise them in some way will do nothing to reduce the number of real injuries which may be occurring.

Blaming-the-system approaches

In contrast to explanations which focus on individual worker characteristics are the accounts given in terms of the environment in which the work occurs and the systems of management or production. I discuss just a few of these in what follows. The list is not intended to be exhaustive.

(a) System failure The NSW coal mines inspectorate employs an accident investigation system which assumes quite explicitly that accidents are due to a system failure of some kind.

> The methodology looks not only at direct causes of an accident but also at surrounding systems which may have contributed to the accident environment. The exact circumstances of any individual accident probably will never occur again, so preoccupation with those exact circumstances is likely to be of limited benefit in future prevention. Broader examination of systems which may have failed, or been less than adequate to ensure safety, in the accident environment are therefore brought within the ambit of the investigation . . . System investigations are conducted on a 'no fault', 'no blame' basis—that is to say the potential culpability of individuals or liability of organisations, are not taken into account (Coal Mining Inspectorate, 1993, foreword).

(b) Company violations of safety regulations Unlike the preceding type, explanations in terms of violations of safety regulations by companies do imply legal liability. They are system-blaming in that it is often an organisational or management system failure rather than the culpable act of an individual which is the root cause of the violation. One US study, for example, concluded that in 76 per cent of cases 'management negligence or failure to exercise due care in controlling the physical conditions of mines was at least a contributing factor to the accidents' (McAteer 1981, p. 943). A study of 39 mining disasters (where five or more people lost their lives) has shown that violations were a contributing factor in 64 per cent of cases (Braithwaite 1985, p. 23), while a study of non-disaster mining fatalities in the US in 1975 showed violations to be a contributing factor in 72 per cent of cases (McAteer 1981, p. 942). In most cases these were company violations.

(c) Production imperatives There is evidence that many injuries are caused by the pressure to restore normal production when for some reason it has temporarily broken down (Nichols 1975). When an assembly line stops or a machine malfunctions the pressure on workers to take shortcuts in order to get things going again are

often irresistible and many a finger or limb has been lost in these circumstances.

Another production pressure which is often cited as a cause of accidents is the production bonus scheme which operates in many industries (Dwyer 1981). Under certain conditions such systems can place great pressure on workers to engage in unsafe practices.

(d) The physical/technological environment Physical/technological environment explanations are often used to account for the high accident rates in particular industries. The large number of accidents in North Sea drilling operations, for instance, was commonly attributed to the fact that men were working at the frontiers of technology and in adverse climatic conditions (Carson 1982, p. 5).

Choosing between explanations: a first attempt

What these blaming-the-system explanations all have in common is that they place responsibility for hazards on management rather than on workers. Thus, even if we discard the notion of blame, as some readers may wish to do, there remains an important distinction between the two in terms of where the onus for the prevention of injury and illness lies—on management or on the worker. The question which then presents itself is which style of explanation is to be preferred. How can we choose between these contrasting and in some cases even competing explanations?

One strategy is to assume that for each accident one or other of the factors discussed will predominate and then to identify the proportion of injuries attributable to each. Those who take this approach normally come to the view that in the overwhelming majority of cases it is the worker who is primarily responsible for the injury. Thus one observer has claimed that 85 per cent of accidents are due to 'lack of training and education, poor work habits or lack of motivation' (see McAteer 1981, p. 938). The remainder are presumably due to management failures, unsafe conditions and the like. And an Australian mine manager once reported to a mining seminar that at his mine 3 per cent of accidents were due to unsafe conditions while 97 per cent were due to unsafe acts on the part of miners. He concluded that 'effort must be focussed on changing men's minds' (AIMM 1975, p. 83).

This is, however, a quite unsatisfactory way of resolving the issue. Unsafe acts may have organisational or systemic causes. If so, it may be the organisational procedures rather than the minds of

men which need to be changed. This point is so important that I shall develop it at length in what follows, drawing on an air safety example.

The multiple causation of accidents: an air safety example

On 12 August 1991 two landing aircraft came within a few metres of colliding at Sydney airport. Had the collision occurred upwards of six hundred people might have been killed. The collision was averted at the last minute by the pilot of one aircraft aborting the landing when *less than a metre* above the runway. The aircraft were landing *simultaneously* on *intersecting* runways, in accordance with SIMOPS (simultaneous runway operations). According to these procedures, one aircraft is supposed not to make use of the full runway but to stop short of the intersection. On this occasion a Thai Airways pilot who had received the instruction to stop short of the intersection had not understood this requirement, and had begun the landing unaware of the restriction and unaware that another aircraft was landing simultaneously on the other runway.

In analysing the causes of the near miss it is easy enough to point to pilot error and to suggest that the pilot did not pay sufficient attention to the landing instructions he had been given. But it is also the case that a more disaster-prone landing system would be hard to imagine. The SIMOPS procedure in use at the time did not allow for any pilot error. Nor did it allow for mechanical failure or any other factors which might make it impossible for a landing aircraft to stop short of the intersection.

An analysis of the incident by the Bureau of Air Safety Investigation (BASI, 1993) draws specifically on the accident analysis model developed by James Reasons in which he distinguishes between active and latent factors, which correspond broadly to the victim- and system-blaming explanations discussed above. (The following quotations from Reasons are found in the BASI report, p 31.)

> Active failures [are defined as] those errors or violations having an immediate adverse effect. These are generally associated with the activities of 'front line' operators: control room personnel, ships' crews, train drivers, signalmen, pilots, air traffic controllers, etc.
>
> Latent failures: these are decisions or actions, the damaging consequences of which may lie dormant for a long time, only becoming

> evident when they combine with local triggering factors (that is, active failures, technical faults, atypical system conditions, etc) to breach the system's defences. Their defining feature is that they were present within the system well before the onset of a recognisable accident sequence. They are most likely to be spawned by those whose activities are removed in both time and space from the direct human–machine interface: designers, high-level decision makers, regulators, managers and maintenance staff.

Reasons argues that an accident or near miss of the type discussed above is usually

> an 'organisational' accident. That is, a situation in which latent failures, arising mainly in the managerial and organisational spheres, combine adversely with local triggering events (weather, location etc) and with the active failures of individuals at the sharp end (errors and procedural violations).

This analysis is broadly applicable to industrial accidents as well. There are both latent (system) factors and active (individual) factors which can be identified in most if not all accidents. It is thus quite misleading to suggest that a certain proportion of accidents can be attributed to unsafe acts by workers and another proportion to unsafe conditions or systems in which the work is carried out.

Choosing between explanations: a second attempt

Even though there may be a contribution from both victim and system in most or all cases, there is still often a need to emphasise one or other of these sets of factors for policy purposes—that is, in deciding how best to prevent harm occurring to workers.

It is interesting to note that the Bureau of Air Safety Investigation chose to emphasise the system factors in its recommendations, urging that the SIMOPS system be changed and landings staggered to ensure that an aircraft could pass through the intersection without risk of collision should it fail to stop as the result of human or any other failure. The Civil Aviation Authority (CAA), which was responsible for the regulation of aviation at the time, took a different view, in effect rejecting this recommendation. It chose to focus on the pilot error and ways of ensuring that pilots comply with procedures. It instructed aircraft controllers to require pilots of landing aircraft to read back their instructions and confirm their ability to hold short of the intersection. In addition, because of fears that certain foreign

pilots might not have sufficient competency in English, international airlines were excluded from being involved in SIMOPS unless they provided documentary evidence that their pilots understood the system.

The CAA decision was clearly less than satisfactory from a safety point of view. It presumably acted as it did because a policy of seeking to ensure that pilots understood their responsibilities was relatively easy to implement. In contrast, the policy of abandoning simultaneous landings advocated by BASI would probably have reduced the number of landings which the airport could accommodate and consequently been resisted by interested parties. But the CAA policy did nothing to rectify the latent failure in the system. In the event of another communication breakdown in relation to landing instructions, or a mechanical failure preventing an aircraft from braking rapidly, there was nothing to prevent a similar incident occurring, this time with disastrous consequences.

This example provides the key to the choice to be made. Emphasising system factors will often be a more effective and reliable way of preventing harm to workers than urging them to be more careful—more effective because it gets at the underlying preconditions which enable harmful incidents to occur, and more reliable since it does not depend on human beings doing the right thing—always a problematic basis for guaranteeing safety. Moreover, management is in control of these systemic or organisational factors. Thus, emphasising management responsibility provides the best chance of harm prevention. The problem is that, from management's point of view, emphasising human error is often the cheaper strategy since it avoids the need to make expensive system changes. Thus management interests and effective prevention often lead in different directions.

Let us consider two more examples to illustrate these points. Accidents which occur when miners jump out of personnel cars before they have stopped can be attributed to the impulsiveness of the men concerned or to the fact that the cars have no doors. The chief safety engineer for British coal mines chose to focus on the latter approach. No amount of exhortation, he writes, will stop men jumping off moving transports. Far better to fit doors to the personnel carriers which open, automatically, only when the vehicle has come to a standstill (Collinson 1978). But such a solution is more costly from management's point of view. It is cheaper to try to change the behaviour of workers by warning them of the dangers and threatening disciplinary action against offenders.

Again, consider the problem of long-distance truck drivers who go to sleep at the wheel, killing themselves and others as result. An examination of their system of work shows that they are often expected to work long hours by freight forwarders, employers and others who determine their schedules (Hensher and Battellino 1990). Such a perspective suggests that the way to handle the problem is to require the latter to change their expectations and to make them legally responsible for the hours worked by drivers. However, there would clearly be widespread resistance from the business community if this led, for instance, to some curtailment of the practice of overnight delivery between major cities, on which so many businesses now rely.

Alternatively, the problem of driver fatigue can be conceptualised as the driver's problem. This leads to suggestions about how drivers can be helped to meet their responsibility to stay awake. They can, for instance, make use of fatigue monitoring devices, available overseas. One such device is an eye closure monitor which is attached to glasses and sounds an alarm if the eyelid remains closed for more than half a second. Also available is a head nodding monitor—an earpiece which buzzes loudly when the driver's head nods forward beyond a certain angle.

The suggestions which see fatigue as primarily the driver's problem are far cheaper and less disruptive to industry. It is partly for this reason that they are regarded by some authorities as having considerable potential (Haworth et al., 1989). But for a variety of reasons they are less reliable as ways of combating fatigue than restructuring the transport industry so as to remove the pressures and incentives for drivers to work unreasonable hours.

The hierarchy of controls

The preceding discussion suggests that it is generally preferable from a harm prevention point of view to locate the causes of illness and injury within the system of work rather than in the characteristics and behaviour of those who suffer harm. This principle gives rise to the well-known 'hierarchy of controls' for dealing with occupational hazards. One version of the hierarchy is as follows (Victorian OHSA, 1990):

- elimination or substitution
- engineering controls
- administrative controls
- personal protective equipment

At the top of the hierarchy, the ideal way to deal with the hazard is to eliminate it totally or to substitute a less hazardous substance, process or piece of machinery. An example would be to use clips, clamps or bolts as joining devices instead of a toxic adhesive.

If it is not reasonably practicable to eliminate the hazard then engineering controls should be considered. Dangerous machinery can have guards installed, fume cupboards and ventilation systems can be constructed to deal with dangerous gases, and noisy machinery can be enclosed.

If this is not reasonably practicable then administrative controls can be applied. Examples would be: reducing exposure periods, reducing the numbers of employees exposed to a hazard, regular cleaning of contamination from walls and other surfaces, and permit-to-work systems, involving agreed procedures and precautions, for identified hazardous operations.

Personal protective equipment (PPE), for instance ear muffs and respirators, is the last resort, to be used only when no other solutions are available. The problems with reliance on PPE are manifold. Mathews (1993, pp. 446–47) lists some of them as follows. First, PPE frequently does not provide the protection claimed, especially if not properly fitted and maintained. Second, and relatedly, the effectiveness of PPE is hard to monitor; it is difficult to measure just what a worker is inhaling through a gas mask and, difficult to know how effectively he or she is being protected. Third, PPE is uncomfortable and commonly makes working more difficult. In hot environments goggles, helmets, masks and protective suits are particularly uncomfortable. Fourth, PPE may be a hazard in itself. Goggles can fog up in moist conditions and ear muffs can prevent workers from hearing warning signals, as the following tragedy illustrates.

> Four Western Australian rail workers were killed by an oncoming train whilst conducting maintenance on a track . . . Apparently the train driver blew his siren as a warning, but due to the noise of the compressor and jackhammers, together with the fact that the men were wearing ear muffs, they were unable to hear the signal and consequently were struck (Mathews 1993, p. 111).

Mathews' judgement on PPE is that 'every piece of protective clothing and equipment that workers have to use is a burden on the worker and represents a failure of management to control the hazard . . . In a properly controlled working environment, a worker should not need any PPE at all' (1993, p. 446).

The hierarchy of controls embodies the principle that where a

worker suffers illness or injury it is better policy to attribute this to the employer's failure to control the hazard than to the worker's failure to use personal protective equipment. This discussion therefore reinforces our earlier conclusion about preferred types of explanation. It is yet another way of expressing the idea that emphasising management responsibility is likely to lead to more effective and reliable solutions than holding workers responsible.

A case study: lead

The following account of the response of one company to an occupational health problem it confronts illustrates a number of the ideas developed above. In particular it illustrates how easily and naturally a victim-blaming approach can arise.

Lead has long been recognised as a dangerous substance and thus a problem for workers in lead smelters (Gillespie 1990). It is especially dangerous for children since high levels of lead in the blood can retard their intellectual development. The possibility that female smelter workers might be pregnant is thus a matter of particular concern. The traditional solution has been to ban women from employment in the lead industry. This is a strategy which treats the problem as arising from the peculiar vulnerability of a particular class of workers rather than from the work environment to which they are exposed. It is a blame-the-victim approach *par excellence*. However, the advent of anti-discrimination legislation has rendered this solution problematic, placing pressure on industry to reduce lead contamination to the point where it poses no appreciable risk to any worker (Winder and Mason 1994).

But, although in this respect the responsibility is being shifted back to the employer, there remain subtle ways in which the lead smelting industry continues to hold workers responsible for the problem. This is facilitated by the way in which lead contamination is measured. There are two common types of measurement: lead-in-blood and lead-in-air. Lead-in-blood measurements are clearly more relevant from a medical point of view. But lead-in-blood measurements leave the way open to holding the victim responsible in a manner which is not possible with lead-in-air measurements. The point is that a focus on lead-in-air leads to a policy of containing lead emissions at their source, clearly a management responsibility. A focus on lead-in-blood throws up the additional possibility of encouraging workers to wear personal protective equipment—

respirators. Workers whose blood lead levels are too high can then be blamed for not using this equipment or not using it properly.

Consider the lead control program instituted by Pasminco at its Boolaroo smelter near Newcastle. (The following factual information was provided by the company: Sinclair et al. 1992. The interpretation placed on this information is my own.) In 1989, in light of the anti-discrimination legislation, the company embarked on a campaign to reduce substantially the blood lead levels of its employees. In terms of the hierarchy of controls discussed earlier, the option of eliminating the hazardous substance or using a substitute is not available. The next best strategy is to make use of engineering controls to curtail emissions at source. The company did carry out a number of engineering improvements consistent with this approach. As a result, lead-in-air concentrations were reduced over a two-year period by 35 per cent, based on sampling at 11 'audit' sites around the plant. But at two points where much of the leakage apparently occurs reductions of only 11 and 16 per cent were recorded.

Most of the company's emphasis appears to have been further down the hierarchy. One strategy was to provide 'clean' rooms for staff which they could retreat to and which would serve as areas of 'respite' from the need to wear respirators. These rooms were sealed and their airconditioning units were improved. Their cleanliness was maintained by encouraging employees who became excessively contaminated with lead dust during their shift to change their overalls and shower before entering these areas, and by imposing stricter controls over the cleanliness of people using the cafeteria. Finally, dry sweeping of the clean rooms (which stirs up lead dust) was banned and high efficiency filter vacuum cleaners were used instead. These procedures, it should be noticed, are largely of an administrative nature and as such are towards the bottom of the hierarchy of controls. As a result of these measures, lead-in-air levels in the clean rooms, isolated from the rest of the plant, were reduced. In addition to the clean room policy the company introduced improved road sweeping and regular housekeeping inspections throughout the plant, again essentially administrative controls.

At the bottom of the hierarchy of controls, Pasminco laid great stress on the use of personal protective equipment. The quality of this equipment was improved and employees were given greater encouragement to wear it. Moreover, employees whose blood lead levels were found to be above a certain threshold were asked to

undergo formal counselling, using a check list, to identify faulty protective equipment or poor work practices which might be responsible. If their blood lead levels reached a second, higher threshold they underwent in-depth counselling by the superintendent and the results were formally recorded. If a worker's blood lead concentration reached a third and even higher threshold level he was required to face an interview with the company general manager, undergo a medical examination and accept a transfer away from his job for a minimum of three months. Note that these formal counselling procedures embody a quite explicit blame-the-victim philosophy, complete with the punishment of transfer for those whose offence is greatest.

The statistics upon which Pasminco places greatest emphasis reinforce this blame-the-victim approach. It is not lead-in-air but lead-in-blood performance which is regularly publicised. But, more than this, the company chooses to emphasise not the average blood lead reading for all employees but the number of employees reaching counselling levels. This statistic, together with the number of weeks since the last transfer, are used for reporting at weekly management meetings, safety committee meetings and in the works newsletter and magazine. The point about these statistics is that they focus on individuals whose blood lead levels are higher than some norm. Such a focus naturally invites a consideration of what it is they are doing to distinguish themselves in this way and in so doing places the responsibility on them, thus downplaying the company's responsibility for the high levels of lead-in-air to which all the workers are exposed.

The company's lead control program achieved a dramatic drop over a two-year period in the numbers of workers whose blood lead concentrations were at counselling levels—from about 100 workers in tests at the beginning of the period to about 10 in tests at the end. Viewed in this way, the policy of holding workers responsible has been effective. However, the average blood lead level of all employees dropped by only 16 per cent during this same period, a far less impressive figure. Since there is no safe level—that is, no level below which workers can be confident that they are not at risk—the situation is still a cause for concern. Putting all this another way, while the 'deviants' from the norm have been disciplined and brought into line, the norm itself has not dropped as much as might have been hoped. With hindsight this appears an almost predictable outcome of the policy.

A final aspect of the Pasminco policy was to discourage workers

from smoking and to prohibit smoking where lead hygiene was a particular problem. While a 'no smoking' policy is desirable as a means of protecting all workers from passive smoking, the point is that at Pasminco this was part of its anti-lead strategy—motivated by the fact that smoking increases the lead intake. The anti-smoking policy thus ends up, yet again, placing responsibility for high blood lead readings on the worker.

Prioritising the control of lead-in-blood rather than lead-in-air has a particularly undesirable consequence which I have not yet addressed. The problem is that atmospheric lead affects not only workers at the plant but also residents in nearby communities. Surveys have shown that the blood lead levels of children in the Boolaroo area are higher than normal and this has given rise to great local community concern (McPhillips 1994). Health authorities have responded with their own version of victim-blaming. They have advised local housewives to keep their houses scrupulously clean and to inculcate good hygiene habits in their children. Given this approach, children whose blood lead levels are excessive reflect badly on the hygiene practices of their parents, particularly their mothers. Such an interpretation would not be possible if the focus were on the measurement of lead-in-air, for this is something for which local residents can in no way be blamed and for which Pasminco must bear full responsibility. It should be noted that Pasminco received a National Safety Council of Australia (NSW Division) Award for Excellence for its program of reducing blood lead levels among its own employees, a matter about which some local residents are particularly bitter.

The Pasminco story illustrates just how easily a victim-blaming approach to OHS can arise. In this case, the emphasis on lead-in-blood measurements contributes powerfully to a focus on what individuals can do to lower their own lead levels and distracts attention from further action which the company might take to reduce lead pollution at source. The result is that lead emission levels at the plant remain higher than they might otherwise be, with consequent effects not only on all workers at the plant but on nearby residents.

Conclusion

This chapter has argued that it is generally more useful to attribute health and safety problems to a systemic, organisational or work

environment source than to attribute them to the characteristics and behaviour of workers. It is more effective, in other words, to hold management rather than workers responsible for illness and injury. This is not an argument stemming from notions of justice or fairness or from a pro-worker/anti-management viewpoint, although such moral and political arguments might well be mounted. It is simply a utilitarian argument: holding management responsible is more likely to achieve the desired outcome than is blaming the victim. Once this is understood, the central question of this book comes into focus: how can we best get management to shoulder its responsibility? This chapter then is really a preliminary one. The central concerns of the book will be articulated in Chapter 2.

2

Regulation versus economic incentives

The regulation of occupational health and safety is part of the much broader development of regulation in all walks of life which has occurred in advanced societies over the past century or two. There are regulations concerning broadcasting, fisheries, pollution, vehicle registration, taxation, education, child protection, sex discrimination and so on. This development is associated with increasingly centralised and powerful government, able to exercise control over more and more aspects of social life. Governments now decide on what is in the public interest and draw up regulations which give expression to that interest. Administrative bureaucracies are then established to enforce the regulations. Various writers have argued that the emergence of regulation is one of the most important features of advanced society (e.g. Kamenka and Tay 1975; Unger 1976).

In reaction to this trend a philosophy of deregulation gained prominence in much of the advanced industrial world in the 1980s. The view was that regulation by government was inefficient and oppressive and that socially desirable ends were better achieved by the operation of market forces. The debate between proponents of government regulation and the advocates of the market was waged in numerous policy areas and in each the market approach gained ground. In Australia, we have seen, for example, the partial deregulation of banking, airlines (with respect to safety as well as such matters as routes and fares) and the labour market (enterprise bargaining as opposed to centralised wage fixing).

The philosophy of deregulation is part of a broader ideological

trend, sometimes known as neo-classical economics or the neo-classical paradigm (Etzioni 1988, p. ix). In Australia this way of thinking has come to be known as economic rationalism (Pusey 1991). Economic rationalism means different things to different people. Indeed, most economists deny that the term has any real meaning or, if it does, that economists are economic rationalists (Brennan 1993). But, whether or not economic rationalism can be identified with any particular brand of *economics*, it is undeniably a *political* program which has been very evident in Australia at state and federal levels and across the party political spectrum. Its main themes are as follows. First, self-interest is the central human motive and a benign one at that. Second, individuals act rationally in pursuit of their interests. Third, the market, not government, knows best. Thus market forces should be given as free a reign as possible and the role of government should be reduced to a minimum. Fourth, economic efficiency (often synonymous with profitability) is the ultimate criterion against which all policies must be judged (see also Emy and Hughes 1993, p. 384ff, for a succinct characterisation). Economic rationalism is associated with such policies as tariff reduction, user pays, fee-for-service, deregulation, privatisation and/or commercialisation of government agencies, the abandonment of foreign exchange controls and the use of economic incentives to achieve government objectives.

The market approach to occupational health and safety

An extreme version of the economic rationalist approach to OHS holds that the optimal outcome with respect to safety will be achieved if markets are left to operate freely without any government intervention.

One version of the argument runs something like this (Oi 1980). Workers can reasonably be assumed to take account of the risks inherent in the jobs they accept. If in their view the risks outweigh the advantages they will not accept a job. If employers have difficulty recruiting workers to particularly dangerous jobs they simply increase the pay and thus alter the cost/benefit calculation which workers implicitly make. Workers who need the money most or who care least about the risks will then find it advantageous to take the most dangerous jobs. Those for whom safety is a more important concern will continue to avoid such work. In this way

employers and employees alike are in the best position to optimise outcomes for themselves.

Such a system does provide some incentives to employers to reduce risks to employees. In particular, in dangerous industries employers may find it advantageous to invest in safety rather than pay ever higher wages to entice workers to risk their lives. But in principle the system provides only as much safety as the market dictates. Putting the matter more emotively, it allows employers to provide as little safety as they can get away with.

In practice, of course, even the limited safety incentives inherent in the model are illusory. Workers do not have any satisfactory way of assessing risks and making cost/benefit calculations (Slovic, Fischhoff and Lichtenstein 1985). Indeed, they may be quite unaware of the risks. And if the risks concern matters of health (e.g. cancer), where the costs may have to be borne years later, these costs may be discounted in ways which lead to outcomes which are very far from optimal for the individual worker. Furthermore, the costs will be borne not only by the worker concerned but also by members of his or her family, who may have had no part in the original decision, and by the wider society, which is called upon to provide health services, disability pensions and the like.

In any case, for a variety of family, social and labour market reasons, workers are often *not* free to shop around for work which 'optimises' the safety/income tradeoff (Noble 1986, pp. 118–20, 212). Most obviously, workers in manual occupations do not have the freedom to opt for the relative safety of office or professional work. Indeed, particularly in times of high unemployment, they may count themselves lucky to have a job at all, and it betrays a callous disregard for human life to suggest that a worker who stays in a dangerous job rather than choosing unemployment is engaging in optimising behaviour.

Perhaps most importantly, the empirical evidence is against the free market model (Robinson 1991). On the whole the most dangerous jobs are the worst paid, contrary to presumption. And despite this, workers in the most dangerous jobs generally show no greater propensity to quit than do those in safer jobs. (See also Gunningham 1984, ch. 12, for a useful account and critique of the free market model.)

These arguments tend to lead even the most dedicated free marketeers to concede that occupational health and safety cannot be left entirely to the unfettered operation of the market. Most would concede that this is an area where the market 'fails'; that is,

where individuals and firms left to themselves will behave in unacceptable ways. For the market to work in a manner which can yield socially acceptable outcomes it must be 'restructured', so that companies have a substantial interest in ensuring the health and safety of their workers. Put another way, policy must be designed to provide employers with economic incentives to protect the health and safety of their workers.

Economic incentives: the environment example

Before developing the argument in the context of OHS it is worth noting that one policy area in which these market-restructuring ideas have been advanced with considerable persistence is the protection of the environment. The traditional approach is for governments to impose regulations, for example limiting or banning altogether certain kinds of pollution or requiring the use of specified pollution control technologies, such as catalytic converters on cars. The market approach, in contrast, relies on economic incentives. These can operate in at least two ways. The first involves restructuring the market by taxing pollution. Such taxes encourage industry to reduce pollution, and by adjusting the level of tax governments can expect to reduce pollution to acceptable levels. (For a discussion of some of the drawbacks see Huppes and Kagan 1989, pp. 216–19.) Second, certain environmental economists have argued for the creation of whole new markets, by creating tradeable property rights in environmental assets and wastes (see Eckersley 1993, p. 23) Thus, staying with the pollution example, polluters might initially be conceded a right to emit a certain volume of pollution. Any firm which did not emit its full quota could sell its right to pollute to other firms unable to stay within their allocation. The individual firm would thus have an incentive to reduce pollution to the lowest financially practicable level in order to sell its rights. The result is that those most able to limit their effluent will make the greatest contribution to whatever overall pollution reduction target the government has set. Thus the reduction of pollution is achieved with maximum economic efficiency.

These so-called market solutions clearly require considerable State intervention, to measure the extent of pollution, if the policy is one of taxing emissions, or to ensure that polluters do not exceed their permitted quota, under a tradeable emissions policy. Thus the

deregulatory gain in all of this seems rather illusory. Nevertheless, these ideas have achieved considerable currency.

Economic incentives applied to OHS

Occupational health and safety is another public policy area in which the broad current of social thought in favour of market solutions has been felt, especially in Australia. The claims run parallel in some respects to those of the environmental debate: government regulation is an inefficient way of ensuring worker health and safety; it needs to be replaced with, or at least complemented by, a market approach; this approach must restructure the market so that employers have an economic incentive to minimise occupational injury and disease. One suggestion made by some economists is to impose a no-fault injury tax on employers in proportion to the number and severity of injuries (Smith 1980). However, the best known method by which costs may be imposed back on the company is the workers compensation system.

Workers compensation insurance is not in its simplest form a preventive measure; it is merely a way of distributing the costs of injury across all employers. It can be made to serve a preventive function if the insurance premiums paid by employers are structured to reflect the accident experience of the particular employer. If companies with high accident rates have to pay correspondingly high premiums this should, in theory, give employers a vested interest in the health and safety of their workers, assuming a carefully designed scheme.

These ideas became influential in Australia in the late 1980s. Until that time workers compensation and the regulation of occupational health and safety had been quite separate activities, with few if any links, either conceptually or organisationally. But towards the end of the decade the market thinking which had so dominated other policy areas was appearing in this corner of public policy in Australia as well. The costs of workers compensation were rising and the view gained ground that if workers compensation premiums were made to reflect the accident claims experience of individual firms rather than the experience of whole industries, as was traditionally the case, then individual firms would have an incentive to promote the health and safety of their workers in order to reduce compensation costs. This new role for the workers compensation system was to be facilitated by greater organisational links between

the compensation bodies and the health and safety authorities. By the early 1990s most Australian jurisdictions had formalised premium incentive schemes and most had developed organisational links between these two areas of public policy (Hopkins 1994a, 1994b). Thus, from the present point of view, workers compensation became an aspect of OHS policy.

Associated with these organisational changes, a profound shift occurred in the way in which the OHS authorities appealed to employers to do the right thing by their workers. Previously, inspectors had used a mixture of gentle persuasion and threat of prosecution, all with the aim of bringing firms into compliance with the law. The new circumstances provided them with an additional argument: economic self-interest—attention to worker health and safety would save employers money. While this message has by no means replaced the threat of prosecution in the armoury of authorities, it is increasingly stressed in their approach to employers. Publications from state OHS agencies regularly speak of the financial savings by way of reduced premiums which can be made by reducing accident rates. For example, one such booklet is headed: 'No other investment can offer such excellent returns' (Vic. OHSA). Worksafe Australia, a federal body which has no enforcement role, takes the argument a step further. In its approach to industry it stresses that not only will good OHS practice reduce premiums but it will also increase productivity and profit generally.

Consistent with this new approach, OHS authorities have to varying degrees changed their self-conception from agencies whose aim is to secure compliance with the regulations to agencies which give 'advice' to their 'clients', among other things on how to reduce their compensation costs. As a senior executive of the NSW OHS authority, Workcover, explained at one point: 'Workcover offices are in the process of becoming one-stop shops providing impartial advice on risk and injury management and worker's compensation, (OH Magazine 44, p. 10). Becoming more 'client-focussed' was one of the main objectives (OH Newsletter 268, p. 3). OHS inspectorates are increasingly seen as offering a 'service' to employers, helping them both to reduce compensation costs and to comply with their general duty of care. Comcare Australia, responsible for the occupational health and safety of federal employees, speaks in its vision statement of a 'partnership with its customers' and of providing 'customer service' (Annual Report 1991–92).

Questioning the role of economic self-interest

These developments raise two general questions. First, the central question of this book: is the appeal to economic self-interest an effective way to get companies to take worker health and safety seriously? Second, what are the implications of conceptualising the role of an OHS agency as providing a service for its clients? I shall defer consideration of the latter question until Chapter 12. The focus in what follows is on the appeal to economic self-interest.

The basic assumption of the new policy approach is that individuals and firms act in ways that are economically rational. There are in fact two assumptions here: first, that people and firms are primarily motivated by self-interest, and second, that they make rational decisions aimed at advancing these interests. Both these assumptions need to be called into question. In doing so I rely on the profoundly important work by Amatai Etzioni, *The Moral Dimension: Towards a New Economics* (1988). Etzioni's book is a study of human motivation and decision making and draws on a wide range of social scientific findings to mount a powerful critique of economic rationalist thinking, or the neo-classical paradigm as he calls it.

Morality as a motivator

Consider first the assumption that self-interest is the primary human motivation. While there is no denying that self-interest is an important motivator, so too are people's moral beliefs. This moral dimension is entirely overlooked by the neo-classical paradigm. To use Etzioni's examples,

> people save not merely to consume in their older age (self-interest) but also because they believe it is indecent to become dependent on the government or their children (moral belief). And people pay taxes not merely because they fear the penalties (self-interest), but also because they consider their government to be a legitimate institution (moral belief). (1988, p. x)

This last claim about why people pay taxes may appear so unlikely to those of an economic rationalist bent that it is worth presenting some of the evidence which supports it. In one clever experiment,

> taxpayers were interviewed during the month prior to the filing of income tax returns, with one randomly selected group exposed to an interview stressing the penalties for income tax evasion, the other to

> an interview stressing the moral reasons for tax compliance. Whereas the moral appeal led to a significant increase in the actual tax paid, the deterrent threat was associated with no significant increase in tax paid, compared to a control group. (Braithwaite 1989, pp. 70–71)

Moreover, there is evidence that at times moral concerns are far more important motivators than self-interest, narrowly conceived. Consider this:

> A British . . . survey asked youths to rank what they saw as the most important consequence of arrest. While only 10 percent said 'the punishment I might get' was the most important consequence of arrest, 55 percent said either 'what my family' or 'my girlfriend' would think about it. Another 12 percent ranked the 'publicity or shame of having to appear in court' as the most serious consequence of arrest. (Braithwaite 1989, p. 70)

Of course it is possible to assimilate the moral dimension into the dimension of self-interest by arguing that in cases such as the above it is in an individual's interest to avoid moral condemnation. But this is far from the spirit of the neo-classical paradigm. Moreover, to argue that it is in people's interest to act morally in order to satisfy their own consciences and win the approval of others expands the concept of self-interest to the point where it has no meaning. On this expanded definition, no matter what a person does, be it moral or immoral, selfish or altruistic, it can be said to be motivated by self-interest. Most importantly, in the present context, to expand the concept in this way is to obliterate the distinction between the market and regulatory approaches to public policy which is the very question at issue in this book. In short, to be able to talk sensibly about policy in this area requires that we maintain this distinction between moral and economic motivation.

But Etzioni goes further than this. He is not simply arguing that people may be motivated by both moral values and self-interest and that in some circumstances moral beliefs are actually the more important determinants of behaviour. Rather he argues that belief systems provide an overarching context in terms of which economic and other self-interested activity takes place. Markets are subsystems of society, and the values which infuse economic activity are derived from that larger and all-encompassing social system. Economic decision making, he argues, is 'circumscribed, substituted and on occasion supported by emotions and values' (1988, p. 3). To give one specific example, Japanese capitalism emphasises the collective good of all those who work for the firm, while American capitalism stresses the primacy of shareholder interests (Thurow 1992). These

differences stem from the different cultural assumptions which operate in the two societies and give rise to significant differences in the way US and Japanese firms do business. They cannot be accounted for by notions of self-interest.

To summarise this section of the argument, self-interest is not the only or even the most important human motivation; beliefs and values play a crucial part in the decision making of both individuals and firms. Economic self-interest is thus a very uncertain basis on which to design public policy. It works in some circumstances, but it is foolish to assume that it will always do so. Policy must be attuned to the fact that in many circumstances beliefs and values are the critical motivators of action.

The implications of this conclusion for OHS are that the authorities should not rely exclusively or perhaps even primarily on economic incentives to secure their objectives. They should also make use of the belief which many managers have that they have an obligation to comply with the law, the desire which they have to be seen to be doing the right thing by their workers and the genuine concern which many have to avoid harming their workers. The authorities must have available to them strategies which play on these motivations. They should aim to shame managers into compliance, perhaps by publicising their wrongdoing or forcing them to appear in court. Such strategies must not be forgotten in the rush to provide economic incentives. (See Braithwaite 1989 on the importance of shaming.)

The limits of rationality

The second part of the critique of the neo-classical paradigm questions the assumption that people and firms make their decisions on a fully rational basis. As Etzioni points out, people 'brush their teeth but do not fasten their seat belts . . . they purchase costly, unsuitable life insurance and pay stock brokers for useless advice and so on' (1988, p. xi).

Our failure to act in ways that are fully rational stems from our inability to assemble and process all the information which may be necessary to make a fully informed and rational choice. Instead, we 'muddle through'. The process has been referred to more technically as 'disjointed incrementalism'.

> The decision maker, rather than attempting a comprehensive survey of all alternatives, focuses instead only on those polices that differ incrementally from existing policies. Only a relatively small number of

> policy alternatives are considered. For each policy alternative, only a restricted number of important consequences are evaluated. Thus there is no one decision or right solution but a never ending series of attacks on the issues at hand through serial analysis and evaluation. The term 'disjointed incrementalism' is used to emphasise the lack of major direction, policy or course-setting capacity. The incrementalist fate . . . is to stumble through history, putting one drunken foot in front of the other. (Etzioni 1988, p. 126; Etzioni's attributions omitted)

The idea that decision making is really a process of 'muddling through' rather than a rational evaluation of all alternatives has been well developed in relation to the behaviour of firms. Research has shown that management decisions typically do not result in optimal performance or profit maximisation. Managerial attention can be focussed on only one or a small number of things at a time and cannot encompass all the factors which would need to be taken into account to optimise performance. In fact, attention is focussed on matters which are causing the greatest concern or in which performance is falling furthest below expectations. Managers often find themselves rushing from one thing to another, 'putting out fires', rather than rationally calculating how best to achieve the firm's goals (Scholz and Gray 1990, p. 286).

The best known statement of the view that firms behave sub-optimally is Cyert and March's *A Behavioural Theory of the Firm.*

> In neo-classical theories of the firm, organisations identify, choose, and implement optimal alternatives. In behavioural theories, organisations simplify the decision problem in a number of ways. They set targets and look for alternatives to satisfy those targets, rather than try to find the best imaginable solution. They allocate attention by monitoring performance with respect to targets. They attend to goals sequentially, rather than simultaneously. They follow rules-of-thumb and standard operating procedures (which simplify and routinise decision making but do not necessarily result in optimal outcomes). (1992, pp. 214–5)

Again, there are important implications here for the design of government OHS policy. It is not enough to assume that rational managers will be interested in reducing compensation costs, for there are many other things on their minds, the effect of which on company profit may be far more dramatic than compensation costs are. It is only if management can be persuaded to focus on questions of health and safety that the previously discussed motives which might lead them to improve their OHS performance can come into play. So long as their attention is elsewhere nothing will be done, regardless of what their motives are and where their interests lie.

Our critique of the neo-classical paradigm leads therefore to the realisation that the key question from a policy point of view is how to get management's attention focussed on matters of OHS. This is the theoretical rationale for this book.

How to get management attention focussed on OHS

The preceding critique suggests that any singleminded emphasis by the authorities on the costs of compensation will not be the most effective means of advancing their OHS objectives. In some circumstances there is no doubt that costs will get management's attention, but in others it may be some aspect of the regulatory process which most effectively focuses management's attention on OHS. Indeed, the complexity of human motivation and the diversity of factors which may gain management's attention suggest that there will be a considerable variety of factors which have potential leverage with employers.This section outlines some of these levers. In effect, what I shall be doing is developing a series of hypotheses which arise from the preceding critique, hypotheses which will be evaluated in later chapters.

First, costs, compensation costs in particular, are important. But costs do not automatically translate into action. Even where they do, the nature of management's response cannot be assumed, for the connection between OHS and compensation costs is highly problematic, and rational managers may find cost-reducing strategies which have nothing to do with OHS. Furthermore, it seems plausible that while any sudden increase in costs will attract attention and possibly action, where compensation payouts remain stable from one year to the next they are likely to be regarded as a routine business cost and not a matter deserving special attention. Finally, the fact that there are *potential* savings to be made by improving OHS will not automatically attract the attention of a busy manager. It is only if there is someone able to direct management attention to this potential that it is likely to have an impact.

Second, where a firm has on its payroll people with some special responsibility for OHS they may sometimes be effective in directing management attention to the matter. I have in mind company safety officers and union safety representatives. When properly resourced and trained these people can be very effective in drawing attention to safety problems and violations, and putting management on

notice that it faces the possibility of prosecution should something go wrong. In this respect they function as whistleblowers. They can also be effective in bringing to management attention the potential savings to be made by improving OHS. Company safety officers can be instrumental in getting management to monitor its OHS performance on a routine and regular basis which, over the long term, can be expected to result in OHS improvements.

Third, the most dramatic and attention-getting outcome of the regulatory process is the possibility of prosecution. Prosecution does not often lead to significant financial penalties, but the possibility of prosecution mobilises other motives—the shame of having to appear in court, the concern to avoid moral condemnation, the fear of bad publicity and so on.

Fourth, activities of an inspectorate which are not prosecution-oriented—routine inspections, special programs aimed at reducing accident rates in particular industries—may get management's attention in some circumstances and thus lead to OHS improvements.

Fifth, unions sometimes focus management attention on OHS in the process of collective bargaining and by threatening strike action. The ultimate motivator here is the cost which union action can impose on employers.

These are some of the more important factors with the potential to gain management attention. They operate with different force in different contexts. Policy must be designed to enhance the effectiveness of all these attention-getting devices. This book seeks to help us understand the circumstances in which each factor can be expected to work and how it can be improved. It rejects any single-minded reliance on economic incentives—that is, the economic rationalist approach—and offers an argument for the importance of various aspects of regulation and the regulatory process as part of the total policy approach to OHS.

3

Employer responses to compensation pressures

The economic rationalist approach assumes that compensation pressures provide incentives for employers to improve their occupational health and safety performance and that employers respond accordingly. But this, as we have seen, is a problematic assumption. This chapter looks at how employers in fact respond to these pressures. In Chapter 4 we examine the limited reach of the compensation system and the way in which many types of employment and many health and safety risks are in principle beyond its influence. Chapter 5 looks at the broader 'safety pays' approach and explores the argument that other economic considerations, for example productivity, can serve to focus employer attention on health and safety.

US research findings

In asking whether employers in fact respond to premium incentives by improving their OHS performance, our first resort is to the research literature. Experience-based premiums—that is, premiums which reflect the individual employer's compensation costs—are common in the United States for employers above a certain size. Establishments below this threshold undergo what is called 'manual rating' in which premiums are simply set in accordance with the experience of the industry as a whole. There have been a number of studies which attempt to measure the impact of this system.

The methodological basis of many of these is as follows. Benefit

levels vary from state to state. In states with higher benefit levels, premiums paid by employers will have to be higher, given the same accident rate. Thus in states with higher benefit levels there will be stronger incentives for employers to prioritise safety. If these incentive effects are indeed operating we would expect a negative correlation across states between benefit levels and claims rates; that is, we would expect higher benefit levels to be associated with lower claims rates. However, there is a second possibility. The higher the benefits the more inclined workers may be to report injuries and take time off on compensation. The point is that benefit levels may affect reporting rates, quite independently of any effect on accident rates. This hypothesis would lead us to expect a *positive* correlation between benefit levels and claims rates. If this is occurring it would obscure any safety effects which might also be operating. The data in several of these studies in fact show a positive relationship—the higher the benefits the more the claims (see Butler and Worrall 1991, p. 193)—making it impossible to draw any conclusions about the real safety effects of premium incentives (see also Chelius and Kavanaugh 1988).

One important study in this tradition avoids this problem. Moore and Viscusi (1989) relate benefit levels not to lost-time injury claims but to fatality rates. The reporting of fatalities is presumably not affected by the level of benefits and consequently, they argue, any relationship can be assumed to reflect safety incentive effects rather than reporting effects. The authors in fact find a strong negative relationship between benefit (and hence premium) levels on the one hand and fatality rates on the other, thus lending support to the hypothesis that experience rating works to make employers more safety conscious.

Two studies using a slightly different methodology have since suggested that both the hypothesised effects—increased claims reporting and decreased injury rates—are present in the lost-time injury claims data (Kniesner and Leeth 1989; Butler and Worrall 1991). However, in one other study which also avoids the interpretation problem discussed above, Chelius and Smith found that experience rating had 'no observable effect on employer behaviour' (1983, p. 136).

While the US research is now beginning to suggest that higher benefit (and hence premium) levels are associated with lower numbers of actual injuries, this does not establish conclusively that employers in the high premium states are responding to the incentive effects of these premiums. An alternative possibility is that there

is no causal connection at all; it is simply that states which have shown a greater concern for employee well-being by enacting slightly higher benefits have also devoted more resources to the enforcement of health and safety law, and that it is this greater enforcement effort which is responsible for the lower injury rates (see Scholz and Feng, as cited in Hutter 1989, p. 168).

There are almost always alternative interpretations for this kind of correlational data, which means that conclusions about causal relationships are never indisputable. One would have to say that the US research findings are suggestive of an incentive effect but that the data are not conclusive.

The Australian experience

Data of a different kind are available in Australia, but these data are even less persuasive than the US research findings. (This section is abridged from Hopkins 1994b, where full references will be found.) Premiums have always been to some extent responsive to claims experience in Australia but, starting with New South Wales in 1987, specially designed premium incentive schemes have been introduced in several jurisdictions. The presumed incentive effect of these new schemes would lead us to expect a reduction in the injury rate. In South Australia, the introduction of a new incentive scheme was followed immediately by a drop in the number of claims. In New South Wales, a decline in the number of lost-time injuries began two years after the scheme's introduction. In Victoria, a decline began one year *before* the introduction of the new scheme. Furthermore, the decline in the number of injury claims in Victoria corresponded with a decline in the levels of employment and hence with a decline in the numbers of people at risk. This employment decline was especially marked in manufacturing industries which had previously generated a disproportionately large number of claims. In short, at least part of the reduction in claims in Victoria is a consequence of the recession and the associated restructuring of industry.

Interpretation of these findings becomes even more problematic when it is noted that although Western Australia has no such scheme its lost-time injury rates per million hours worked have decreased steadily over the last decade. The fact that such a decline occurred in a state without a premium incentive scheme must raise doubts

about attributing the decline in other states to their incentive schemes.

A further important question mark hangs over the Australian data. Premium incentives are, strictly speaking, incentives to employers to find ways to reduce the number of claims. This can be achieved not only by reducing the actual number of injuries but also by discouraging the injured from making claims. If this latter process is occurring, reductions in lost-time injury claims will be a quite unreliable indicator of safety performance. From the point of view of the compensation authorities, the question of just how employers are managing to reduce the number of claims is unimportant; the important point is that claims and hence costs are coming down. There has thus been no attempt by these authorities to ascertain whether the reduction in the number of claims corresponds to any real reduction in the number of injuries. The possibility that premium incentives have effects other than promoting safety is a matter to be discussed in greater detail below. It suffices to say at this point that these effects make it impossible to interpret trends in numbers of lost-time injuries as reflecting changing safety performance.

A fresh start

Faced with these almost insuperable data problems, how are we to proceed? We take a different tack. Rather than attempting to demonstrate in any 'macro' or overall way that premium incentives do or don't have beneficial safety effects, let us simply assume that they do *in some circumstances*. This is not a problematic assumption. Indeed, I shall shortly provide examples which demonstrate this effect. Once we accept this proposition, a new set of questions come into focus. What are some of the other ways in which employers respond to premium incentives? What factors prevent these incentives from having safety effects? What factors maximise the safety effects of premium incentives? And so on. These questions are, after all, of more use to policy makers than any data on overall effects. The fact is that in Australia premium incentives are here to stay, for reasons which have little to do with their impact on actual injury rates (see Carson and Henenberg 1988). From the policy point of view the important thing is to be aware of their limited ability to deliver safety effects and to explore ways in which this ability might be enhanced.

Examples of the incentive effect

Before we address some of the above questions in more detail here are two examples, if any are needed, which demonstrate that premium incentives do *sometimes* generate real safety improvements. In 1981–82, Repco in Launceston experienced 22 claims for RSI—repetition strain injury (Dunstone 1985, pp. 151–3). As a result its compensation premium jumped from $123 000 to $310 000, an almost threefold increase. This dramatic increase focussed management attention wonderfully on the problem of RSI. Repco accepted that the injuries were real and preventable, contrary to the approach taken by some employers, and set about solving the problem. It identified incorrect movements made by machine operators, trained its employees and introduced job rotation and exercise programs. The result was a major reduction in the number of new claims and a reduction in the premium over the next four years to close to its original level.

A second example, drawn from my own research, illustrates how OHS personnel within a firm can use premium incentives to good effect. A nurse at a newly-opened abattoir became concerned about the possibility of Q fever, a disease which workers can contract from animals. She designed a vaccination program which cost upwards of $13 000. Management needed convincing that this program was cost-effective. She explained that an individual who contracted Q fever could be off work for up to two years, which would have a substantial effect on the compensation premium. If an epidemic were to occur the compensation costs could seriously affect company profit. This argument was enough to gain management agreement and the program went ahead.

The principal effect of compensation pressures: claims/injury management

Although premium incentives can sometimes generate safety improvements, this is not their primary consequence. The first response of management when its attention is drawn to compensation costs is claims management, a strategy which has nothing to do with improving health and safety. The point is that compensation costs are affected not only by the number of claims but by the duration of these claims; that is, the amount of time for which injured workers are off work. If claims can be managed in such a

way as to reduce the length of time off work, there are dramatic savings to be made. It is in fact far easier for an employer to reduce the duration of injury claims than to reduce the number of injuries, and for this reason the rational employer will embark on a claims management program as the first line of attack on compensation costs. Compensation bodies also operate on the basis that effective claims management is the best way to reduce costs, and most have claims management units to advise firms on what to do.

Rehabilitation is an important component of effective claims management. Some states require large firms to have rehabilitation policies and many large firms need little urging. In one firm I studied the policy was 'to commence rehabilitation before they hit the floor'. An important part of the rehabilitation process is to put the workers back on light or alternative duties until such time as they can return to their normal jobs. Thus, for example, manual workers with back injuries can be given sedentary office work. One outstanding example of this approach is the way Telecom has been able to take back many of its RSI-affected keyboard staff by providing them with computer terminals trained to recognise the operator's voice (Jack and Lenko 1992).

Long-term claimants contribute disproportionately to total costs, and a management focus on these cases can be especially effective in reducing premiums. By way of illustration, in one large organisation the premium went up in a recent year by $2.2 million. This was certainly enough to attract management attention. An analysis revealed that the increase was not due to the emergence of any new health and safety problem, but rather to an increasing number of long-term claimants. It was discovered that there were now 35 people who had been on compensation for over a year. Some of these were RSI cases from the 1980s. The organisation had not previously had an active claims management policy, but as a result of this discovery it set about reviewing these cases and seeking ways of getting the claimants back to work.

Converting lost-time injuries to injuries without lost time

Many injuries are relatively minor and result normally in only a few days off work. Firms which have adopted intensive claims/injury management practices discover that many of these cases may require medical treatment, bandaging for example, but not necessarily time off work. Even a cut which requires stitching or a back

injury which needs physiotherapy may not necessitate any time off work other than the day on which the injury occurred, provided that some form of alternative or light duties can be provided for the worker. In this way an intensive claims management program results in the conversion of lost-time injuries into injuries without lost time. This is a matter of great significance. Not only does it cut compensation costs but it results in a reduction in the lost-time injury rate—sometimes a very dramatic reduction—without necessarily producing any reduction in the number of injuries. On the basis of the firms interviewed in this project it is safe to assume that, wherever lost-time injury rates are dropping significantly, a major factor in this drop will be the conversion of lost-time injuries to injuries without lost time. This phenomenon makes trends in lost-time injury rates completely unreliable as indicators of safety trends. This point is so important that it deserves further illustration.

An example of tighter claims management

A company had recently appointed a new and energetic OHS manager. She decided to tackle one of the company's plants which regularly recorded between 30 and 40 LTIs (lost-time injuries) a year. She explained to me that a culture had developed at the plant in which workers saw compensation as a form of leave to which they had a de facto entitlement. Many of the injuries for which doctors were giving these workers time off were discovered on closer scrutiny to be relatively minor, requiring bandaging or some other medical treatment but not time off work. She adopted a policy of challenging every claim, and within two years the plant was down to six LTIs in a year. This dramatic reduction was entirely attributable to tighter claims management which resulted in the conversion of LTIs into injuries without lost time.

Once claims were 'under control', she said, her attention moved to safety. The firm had had two back injuries costing a total of $90 000, arising out of a particular work process which involved some heavy lifting. More injuries were predictable. These matters were put to top management, which agreed to buy some scissor lifters at a cost of $15 000 each in order to eliminate the problem. At this point, then, compensation pressures were beginning to yield safety improvements, but only after the number of claims had been reduced as far as possible by a tighter approach to claims management.

The drive to achieve zero lost-time injuries

At times the conversion of lost-time injuries to injuries without lost time becomes an obsession, driven not by compensation pressure but by company pride in its enviable LTI record. Some large companies go for years without a single lost-time injury and will go to extreme lengths to protect this record. One multinational offshore oil producer recently celebrated five million hours worked without a single LTI. At the same time, the company's health and safety newsletter carried the following report.

> While the five million workhour LTI free achievement . . . is pleasing, there is concern about the number of fall-related incidents and injuries. The most serious incident occurred when a casual platform assistant suffered a serious injury from a fall down the stairs from the helideck. He suffered bruising, ligament damage and concussion and was medivaced via helicopter and ambulance to [a hospital on shore].

The newsletter goes on to report six other recent injuries. None appears to have resulted in any lost time. Even the man medivaced ashore was apparently back at work for his next shift. A union delegate with the company complained to me of two cases, one involving a broken arm and another a broken wrist, where the men were brought back to work in plaster and on painkillers and unable to be usefully employed. These men were there against their will, he said, and would be a hindrance in any emergency. One might almost conclude that the obsession with astronomical numbers of work hours free of LTIs is itself something of a safety hazard. Most certainly, this intensive injury management process means that the LTI rate is a thoroughly misleading indicator of the number of injuries occurring to company employees. To its credit the company is aware of this problem, as the article quoted from above indicates.

Claims suppression as an employer response to compensation costs

Claims management is a legitimate employer response to compensation costs, even though it has nothing to do with improving OHS performance. There are also illegitimate responses, one of which is claims suppression. Consider the following case.

A building industry subcontractor, whose workforce fluctuates constantly but who at times employs up to a hundred workers, has had only one compensation claim in nine years. This concerned a

man who broke his shoulder and was off work for six months. But this was by no means the only injury which employees suffered in this period. One reason why these injuries did not generate compensation claims was that the employer made it clear that he regarded compensation claimants as malingerers and bludgers. Workers who had to take time off as a result of injuries were asked to use their sick leave to cover their absence. This is clearly an illegitimate request and quite contrary to the interests of employees who, if the injury flares up at some later stage, will have no evidence that it is work-related and thus little likelihood of getting compensation. Moreover, this employer explicitly threatened to sack workers who even looked as if they had the potential to make a claim. During my research four workers suffered vibration injuries from long hours of work with a jackhammer. One managed to continue working, two took sick leave and a fourth, whom the employer suspected of malingering, was sacked. Part of the power the employer exercised over these employees stemmed from the temporary and uncertain nature of their employment. All knew that the current job was winding down and that some of them would be retrenched. They knew, too, that anyone who had suffered an injury would very likely be the first to go. It is obvious, then, that this employer has very deliberately and effectively been suppressing legitimate compensation claims and that this is a considered response to compensation costs—a response which patently has nothing to do with improving OHS. (This case is discussed in greater detail in Chapter 9. See Alcorso 1988 and Working Women's Centre 1993 for further examples of claims suppression.)

The multiple causes of claims suppression: a clothing industry example

The building subcontractor referred to above was evidently involved in an active and deliberate process of claims suppression in order to maintain his near perfect compensation record and his low compensation premium. At times, however, the phenomenon of claims suppression is more complex: it may result from the simultaneous operation of a number of influences, with employer interest in minimising compensation costs only an implicit factor.

Consider one of the garment manufacturing firms studied in the course of this research. It needs to be stressed that this was not one of the many disreputable sweatshops which characterise the garment industry but an industry leader with a good reputation.

The company has half a dozen lost-time accidents with associated compensation claims each year. It does not regard compensation as 'a big ticket' item. Most of the injuries which come to the attention of the health and safety officer result from slips and trips—bruising, ankle-twisting and the like. The company has not had a repetition strain injury claim for some time. RSI had been a problem years ago, I was told, but not now. The company safety officer was not aware of any underreporting of injuries and nor was the union representative, who, incidentally, told me that he enjoyed good relations with management and that top management were well-meaning people.

Despite this, when I asked the company nurse whether there was any underreporting of injuries she told me that more than a dozen women had come to her within the last six months wanting treatment, mainly for repetition injuries. These workers were terrified of the consequences of coming forward in this way and implored the nurse to tell no one. She massaged their arms and gave them painkillers but felt unable to take the matter up with management. As she put it, 'I tear my hair out about what to do, but my hands are tied because of their wish not to report'. In one case the nurse insisted that a woman in severe pain see the company doctor, but although an appointment was arranged the woman would not tell the doctor her story. Here, then, is a situation in which injured women work on in pain, legitimate compensation claims are suppressed and management seems unaware of the problem. How can this be?

Although the company does not threaten to sack workers who make claims, this is very much what workers fear. The company is progressively reducing its workforce as it restructures, and in the last round of retrenchments one of the women who went had been a compensation claimant. Workers saw this as confirmation of their fears, even though, as the nurse assured me, the woman had left voluntarily. Workers also fear that if they develop a compensation record this will follow them after they leave, making it difficult for them to find new work.

A second factor is the company's active policy of reducing absenteeism. By way of illustration, with flu one of the major causes of absenteeism all workers have been given flu injections. Knowledge of the company's concern about absenteeism contributes to the disinclination of workers to seek time off on compensation.

A third factor is the pay system. A significant portion of the pay of those involved in garment production is bonus pay, based on a

worker's output. The result is that these workers work at high speed, so much so that some feel able to go to the toilet only in scheduled work breaks. This rapid pace of work contributes to overuse injuries. But at the same time the bonus system discourages claims. Compensation pay does not compensate for lost production bonuses, and this provides a strong incentive for workers to work on in pain rather than take time off on compensation. It is noteworthy that most of the compensation claims which *are* made come from people working in the firm's warehouse, where workers are not paid production bonuses.

One might wonder why the union representative was not more aware of and concerned about this problem. The explanation is to be found in the great gulf which lay between him and the workers he was supposed to represent. He was white, male and English-speaking. The garment workers were all women, many of them Asian and many unable to speak English. There was thus a major communication gap between the workers and their supposed representative.

And why did the company's health and safety committee not deal with the matter? The issues discussed at committee meetings came largely from the warehouse, such as the weight of boxes being lifted, the height of shelving and the need for more ladders. The RSI problems experienced by the workers making up garments were not discussed. Several factors contributed to this situation, among them the different pay systems and the fact that there were more males in the warehouse. Moreover, the problems in the warehouse were relatively visible, while the problem of RSI was far less obvious to outside observers, making it more difficult for the garment workers to complain.

Here, then, is a case of claims suppression far more complex than the case of the building industry subcontractor. The insecurity of employment resulting from the firm's restructuring created a fear in the minds of workers that making a claim might somehow hasten their departure, a fear which management did nothing to allay. This fear was exacerbated by the fact that the workforce was disproportionately Asian, female and non-English-speaking. Moreover the bonus system of pay gave workers a direct financial incentive to work on in pain as long as possible. A final factor is that RSI sufferers are particularly likely to be disbelieved and/or blamed for their own injuries. It cannot be concluded that claims suppression in this case was a deliberate or intentional employer response to the costs of compensation. But the facts are: that management had

created a system of work which resulted in the systematic suppression of claims, that it seemed unconcerned about this situation, and that it benefited financially from it. One can be fairly confident that had claims suppression been costing it money the firm would have taken a far more active interest in the problem. It is thus reasonable to conclude that claims suppression is occurring in this context because it is to the employer's advantage. (Further evidence of the extent of this problem can be found in Working Women's Centre 1993.)

Claims contestation

If claims cannot be suppressed, their validity can still be contested. This is an important part of the response by employers and their insurers in certain circumstances. The validity of a compensation claim can be contested by challenging a medical diagnosis or by arguing that a condition is not work-related.

The history of lead smelting operations in South Australia provides a classic example (Gillespie 1990). In 1917 new legislation gave workers the right to compensation for lead poisoning. Although lead poisoning was endemic the number of claims was initially small, in part because of workers' fears that they would be dismissed for making a claim. However, the numbers grew, and within a few years the company concerned was experiencing an epidemic of claims. Its response, among other things, was to seek control over the process by which workers were diagnosed as suffering from lead poisoning. One result was that in 1927 a new lead disease compensation board rejected 17 per cent of claims compared with a rejection rate of 2.5 per cent in 1925. Furthermore, local doctors were aware that their diagnoses were being challenged and were no longer prepared to treat symptoms such as headache and general malaise as proof of lead poisoning, as they had been at the height of the epidemic. The strategy of challenging the medical diagnosis of lead poisoning was thus one of the means adopted by the company to bring the problem under control.

A very similar story could be told in relation to the epidemic of RSI (repetition strain injury) which occurred in Australia in the 1980s. One response by employers and their insurers was to contest claims on the grounds that RSI was not a medically known condition, or that if it was it was not work-related (Hopkins 1989b). In one celebrated case in 1987 the federal taxation department won a

compensation case against an employee on the grounds that, since RSI was unknown overseas, it could not be a real medical condition (Campbell 1988; Reid and Reynolds 1990).

This strategy of contesting RSI claims remains widespread. An academic colleague recently made a compensation claim in relation to a repetition strain injury he was suffering as a result of keyboard work. His claim was for physiotherapy expenses only; there was no lost time involved. He was sent to a doctor, nominated by the insurer, who told him that he was a fit, healthy and *well-motivated* young man and that in the doctor's experience it was usually only migrants and women who were prone to making such claims. The doctor reported that he could find no physical evidence of any ailment, and on this basis the claim was denied. Eventually the university agreed to pay for the physiotherapy, but on condition that the man sign an acknowledgment that it was in no way responsible for his condition.

The strategy of contesting claims is possible wherever doubts can be raised about the diagnosis, as is very often the case with occupational disease. Claims contestation is particularly likely where employers and their insurers either foresee or are actually experiencing an epidemic of claims. In these circumstances they may devote massive resources to the contest. In the taxation department case mentioned above the worker was claiming twenty thousand dollars for pain and suffering, but the Commonwealth spent an estimated half million dollars to defeat her claim. Clearly a lot was at stake.

Further examples of illegitimate employer responses to compensation costs

It should be noted that unscrupulous employers are likely to find all sorts of devious ways of responding to the premium incentive schemes designed by the compensation authorities, quite apart from straightout claims suppression or contestation. One of the more ingenious is described in the 1990–91 Annual Report of the Victorian Accident Compensation Commission (p. 17). At that time claims based on a recurrence of an old injury or on a second injury were excluded from a firm's experience for the purpose of calculating premiums. This was, in part, to encourage employers to take employees back before they had fully recovered. It may also have reflected the belief that such workers were in some way

injury-prone and that it was not reasonable to hold employers responsible for their injuries. Certain unscrupulous employers realised that if they organised all their workers, or at least those most exposed to risk, to make one minor claim, then any further, bona fide injuries later in the year which might involve far more expensive claims would not count for the purposes of premium calculation. In this way some employers were able to have in excess of 80 per cent of their costs excluded from premium calculations. This was a perfectly rational response to the incentive scheme devised by the Victorian authorities, and governments must be aware that some employers will seek out these perverse responses wherever they can—in the same way that rational firms resort to highly contrived though possibly quite legal tax avoidance schemes.

A further perverse and in fact illegal employer response to compensation pressures is to understate to the authorities the size of the firm's payroll. This is a rational response, since compensation premiums are a function not only of the cost of claims but also of total payroll. For small firms the premium is determined almost completely by the number of employees in various occupational categories and the amount paid to them in wages. Government inspectors expend considerable resources in checking on wages declared, in an attempt to minimise this kind of employer response to compensation costs. One small employer I interviewed admitted that she understated her total payroll by about 5 per cent by giving her employees some of their pay as cash in hand. This suited her because it reduced the premium she paid as well as suiting them because they were able to avoid paying tax on this unrecorded income. She justified her practice on the grounds that the business was on the verge of bankruptcy and such cost minimisation strategies were necessary in order to stay afloat.

Organisationally structured immunity to compensation pressures

The discussion so far has concerned the various ways in which employers respond to compensation pressures, only some of which have anything to do with improving safety. But there are also circumstances which can render managers quite immune to these pressures, ruling out even the possibility of compensation costs generating safety improvements. The problem arises in large organisations and stems from the way in which compensation costs

are distributed throughout the organisation. Suppose that the insurer charges the company an annual premium based on the cost of claims lodged. If corporate headquarters pays this premium direct from its own resources the various business units or budget or profit centres within the organisation will not be affected by this cost and business unit managers and their subordinate line managers will have no financial incentive to do anything about claims in their own sphere of influence. What often happens in practice is that corporate headquarters does not pay the premium from its own resources but distributes the costs to the various budget centres on the basis of the number of employees working in each centre, not on the basis of the cost of claims originating from that centre. Again, therefore, managers at these levels have no incentive to reduce the cost of claims. This was the situation in several large companies I visited in the course of this research, and it means that, no matter how well designed the premium scheme is from the point of view of the compensation authorities, the incentive effects are nullified by the company's internal accounting procedures.

One quite striking case was a large university. Most of the budget centres within this institution had negligible numbers of claims, but one section, responsible for doing maintenance work around the campus, had substantial numbers of injuries and an injury frequency rate many times higher than the campus average. Compensation costs, however, were distributed to budget centres on the basis of numbers of employees and not the cost of claims, and so this section experienced no financial pressure to improve its safety performance or even to engage in better claims management. The university's health and safety officer had targeted the maintenance section for special attention, but clearly the compensation system was not providing him with any financial leverage in his campaign.

This problem can arise even in the case of self-insurers—firms so large that governments allow them to carry their own risk without the requirement to insure. Self-insurers should in theory be particularly sensitive to the cost of compensation since their costs are entirely determined by their claims experience. But one very large self-insurer I studied maintained a central compensation department which paid claims originating in any part of the organisation and distributed its costs to the various profit centres on the basis of number of employees rather than claims experience. In this way the organisation inadvertently rendered itself impervious to compensation pressures. Such structured organisational inattention to the cost of claims is especially surprising in the case of self-insurers.

Self-insurance is not a right but a privilege granted to very large organisations if they can demonstrate that they satisfy certain quite stringent conditions. If self-insurance is to be even theoretically capable of generating safety incentives then it would seem that one of the self-insurance licence conditions should be that the firm concerned distribute its compensation costs to budget centres on the basis of claims experience, and not on the basis of number of employees.

One final example of a badly designed scheme. A large metropolitan hospital pays a premium to the health authority responsible for funding and administering all the state hospitals in the area. This authority pays a compensation premium to an insurer who gives a refund at the end of the year which depends on the claims experience of the various hospitals. The hospital I studied frequently overruns its general budget and the health authority therefore retains whatever compensation rebate may be due to the hospital, in order to help offset the budget overrun. Thus neither the hospital as a whole nor any of its line managers has any incentive to reduce the cost of claims. A more poorly designed scheme could hardly be imagined.

By way of contrast, consider a large organisation which structures its compensation system so that local area managers are rendered as sensitive as possible to the costs of claims. The firm is a self-insurer. The principle is simple. The lowest budget centres within the organisation pay no premiums and their compensation costs are uninsured. This means that managers at this level must fund compensation claims from within their own budgets. The practical consequence is that if a worker is off work injured the manager must continue to pay the worker's wages but make do without his or her services, if necessary redeploying staff in the area to fill the gap. If the unit experiences a very large common law claim, or for any other reason runs into serious financial difficulties, it can negotiate with senior management for a special allocation of funds, but this is not an easy process. This system provides local area managers with a major incentive to minimise the cost of claims, both by preventing injury and by careful claims management. This is the organisation in which 'rehabilitation begins before they hit the floor'.

I have argued that in the case of large organisations the failure to distribute costs throughout the organisation on the basis of claims experience generates an organisationally structured immunity to these cost pressures. This immunity nullifies whatever safety

incentives the compensation system might in theory be able to deliver. There is one qualification to this argument which must be made. It is true only for costs which are too small to attract the attention of senior management. Where a health and safety problem is generating organisation-wide effects, senior management is likely to respond with an organisation-wide initiative. Take the case of the university discussed earlier in which claims arising in the maintenance section had no incentive effects. During the mid-1980s the university experienced an organisation-wide increase in claims for RSI. This was enough to attract the attention of senior management which responded by setting up an OHS unit headed by an ergonomist. In short, the phenomenon of immunity to compensation pressures operates at the 'micro' or local level and not at the 'macro' or organisation-wide level.

To sum up this section, the organisational immunity to compensation pressures identified here seriously limits the effectiveness of the premium incentive schemes designed by governments. No matter how well designed these schemes may be, their impact can be largely nullified by a large organisation's internal accounting procedures. This was indeed the case for several of the organisations encountered in this study. The result is that in many circumstances compensation costs are unable even in principle to deliver safety improvements.

Conclusion

We have seen in this chapter that there are numerous factors which limit the safety effects of premium incentives. Most importantly, the rational employer's first response to compensation costs on becoming concerned about them is to improve claims management, which in and of itself does nothing to improve health and safety. Moreover, in a variety of circumstances the employer response to compensation costs is deliberately to suppress claims or perhaps unintentionally to encourage claims suppression. Another rational response is to contest some claims. Perverse or illegal responses are also possible. Finally, large firms may sometimes be unresponsive to compensation costs because of organisationally structured immunity. In view of all these problems it would be foolish for governments to rely exclusively or even primarily on premium incentives to secure workplace health and safety.

But, despite all this, compensation pressures can generate real health and safety improvements. This chapter has laid the foundation for a discussion of how compensation costs can be used to focus management attention on safety. This discussion will be undertaken in Chapters 11 and 12 where the particular task will be to identify ways in which governments, health and safety officers and others can best harness whatever safety potential there may be in the workers compensation system.

4

Beyond the reach of compensation: the need for regulation

In Chapter 3 we looked at ways in which employers respond to compensation cost pressures. We saw that many of these ways have nothing to do with improving workplace health and safety. In this chapter we look at a variety of specific situations in which health and safety problems fail to generate any compensation cost pressures at all, with the result that employers have no incentive even to minimise the cost of claims—let alone to improve safety. Sometimes in these situations union pressure, adverse publicity or the personal concerns and commitments of top managers will be effective in securing worker health and safety. But the argument to be advanced in this chapter is that, in most of the specific situations to be considered, some form of government intervention offers the best chance of focussing management attention on worker health and safety. Chapters 9 and 10 illustrate this argument in two particular industries—large building construction and coal mining. In these later chapters we will look in detail at the insignificance of compensation pressures and the importance of alternative mechanisms for ensuring that employers in these industries take health and safety seriously.

Illness

In many respects occupational disease is a far more serious problem than occupational injury. While about 500 workers die each year from work-related injuries in Australia, it is conservatively estimated

that at least a thousand die each year from work-induced cancer alone (Winder and Lewis 1991, p. 70). This is not reflected in workers compensation statistics since cancer is rarely compensated. In Western Australia, for instance, although there appear to be no cases where workers have been compensated for the asbestos-related cancer, mesothelioma, cancer registry figures show that the number of cases diagnosed has been rising steadily since 1975, with 41 new cases diagnosed in 1991. The total since 1975 now stands at 406 (Western Australia 1992, pp. 2, 70). The annual number of new cases is expected to peak early next century. These cases can reasonably be assumed to be the result of work-related exposure to asbestos. But because of the long onset time workers have usually retired by the time their symptoms appear and they do not generate lost-time illness claims. Thus during the time the damage is being done there is no question of compensation and no financial incentive for an employer to do anything about the problem.

Furthermore, it is often difficult to demonstrate in any particular case that a condition was work-induced. An epidemic of flu, or respiratory problems experienced by asthma sufferers in a large building, may be a direct result of the airconditioning or ventilation system. But the individual office worker is most unlikely to be able to demonstrate that this is the cause of his or her illness. Or, again, take the case of an individual asbestos miner who has developed a respiratory problem. Any claim that this was work-induced might be contested by the employer or insurer on the grounds that the worker was a heavy smoker and that this, rather than asbestos dust, was the cause of his particular symptoms. There may in fact be no way in any individual case for the worker to establish the work-relatedness of his complaint. There is epidemiological evidence that the rate of respiratory problems among asbestos workers is higher than for the rest of the population and that this holds true for smokers and non-smokers alike. At this level there is no denying the causal connection. But in any one case it is possible that it was the cigarette smoke and not asbestos dust which caused the problem. The failure to establish causation in the individual case may thus result in the denial of compensation. This was indeed the experience of the asbestos miners in the northern NSW town of Baryulgil (Lawrence 1985, p. 22).

Unfortunately, where the compensation system fails to generate safety incentives it cannot be assumed that government intervention will necessarily be more effective. In fact, in the case of asbestos miners government inspectorates exhibited a total lack of

commitment to ensuring that mining firms complied with relevant dust concentration limits. The inspectorates had in effect been captured by the industry they were supposed to regulate (Gunningham 1987). By contrast, resolute action by government regulatory agencies has completely eliminated coal miner's pneumoconiosis from the coalfields (see Chapter 10). Why government intervention has been so much more effective for coal mining than for asbestos mining is a fascinating question, currently under investigation (Joyce).

Occupationally caused skin disease provides a final example of a health problem which fails to generate compensation pressures commensurate with the scale of the problem. A recent study of the records of the Sydney Skin and Cancer Foundation found that only about one in three patients with occupationally caused skin disease had applied for workers compensation and only one in four had actually received compensation, despite the fact that the average time lost from work was one month! (Rosen and Freeman 1992.)

Small business

Small businesses employ the majority of workers in Australia. Yet the circumstances of small business are such that compensation costs do not provide safety incentives to employers. In a small business, injury is a rare event and claims are even rarer. A business may go for years without a single compensable injury. So, when an injury does occur, from the employer's point of view it is an unusual and unpredictable event. It is seen as a genuine accident, a chance event, in the same way that car accidents are, from the driver's point of view, chance events. For these employers, the premiums they pay provide insurance against the compensation costs associated with such chance events. They do not function as an incentive to do anything about preventing what the employers see as largely unpreventable occurrences. It needs to be noted, too, that most workers compensation schemes are designed in such a way that for small employers the premium is determined largely by the nature of the work and the number of workers employed and only minimally by the actual claims experience, in recognition of the essentially chance nature of these events for small employers. Workers compensation thus provides little or no incentive, even in theory, for small employers to concern themselves with safety. Finally, many small employers are unaware of whatever link there may be between their claims record and their premium. The premium

actually charged varies year to year because of changes in number of employees and changes in the premium system itself, and the small employers interviewed in connection with this study attributed changes in their premium to these factors rather than to their claims record. They were, in fact, quite unaware that their premium was in any way affected by their claims record. The conclusion is inescapable that, for the majority of workers in Australia, workers compensation plays virtually no part in promoting their safety.

What does attract the attention of small employers to questions of safety? Despite all the publicity campaigns organised by the authorities, small business owners interviewed were largely unaware of the substance of health and safety regulations. Most were far too busy staving off bankruptcy to read the OHS materials sent to them by the authorities. One had a summary of the main provisions of the Act hanging in a plastic cover in his office, but the cover had never been opened. What does have an impact, however, is a visit by the health and safety inspector. This is a memorable event. And it is an event which gains their undivided attention for they must down tools to deal with the inspector. In practice, these employers rely on inspectors to tell them what the relevant regulations are and to advise them on how to comply. They told me they are happy to comply, wishing to do the right thing. After all, 'we would not want to have an employee death on our conscience', as one put it. But they also know that, once an inspector has called and given advice on how to comply, there will be a follow-up visit to check on compliance. None of the small employers I interviewed was aware of any prosecutions, nor did they know anything about the other enforcement powers of inspectors—prohibition and improvement notices and on-the-spot fines. They had, however, a general awareness that inspectors wielded government authority and that non-compliance would eventually lead to a punitive response of some kind. One small employer had recently been penalised by the taxation department for understatement of income. This, she said, had reinforced her awareness that the government was 'out there watching', and that if she failed to comply with advice given by the OHS inspector there might be similar nasty consequences. Here, then, was an interesting and unexpected example of the specific preventive effect of punishment: punishment for a tax violation was promoting compliance with other areas of government regulation.

In summary, a visit by the inspector is the only thing that reliably draws the attention of small employers to health and safety matters. Routine inspections by regulatory agencies are now somewhat

unfashionable, the preferred mode of operation being to target inspection programs on particular high risk employers and industries. While there may be good reason for deploying limited resources in this way, it should also be borne in mind that routine inspections are the only effective way in which small business is confronted with its health and safety obligations and the only safeguard for the majority of Australian workers.

The self-employed: e.g. farmers

The self-employed are a set of workers who for the most part are not covered by workers compensation legislation. It follows that compensation pressures have no part to play in promoting the safety of these workers. Farmers are a case in point. Figures for 1987 show that 64 per cent of rural workers in Australia were self-employed at that time. In the category of farmers and farm managers, 85 per cent were self-employed (Davidson 1988, p. 244). Thus only 15 per cent of farmers and farm managers were covered by workers compensation.

One specific illustration will dramatise the point. The Victorian Accident Compensation Commission recorded three tractor-related deaths from mid-1985 to mid-1990. However, over the same period the Victorian Department of Labour was notified of 37 tractor-related deaths, representing nearly 20 per cent of all fatalities reported to the Department (Victorian DoL 1990). Clearly the compensation system has no part to play in reducing this very substantial toll. Here again, direct government intervention is the key. Many tractor fatalities occur when tractors roll over onto the driver. But individual farmers may never have experienced a tractor rollover and so may not be personally sensitive to the need for rollover protection. The need for such protection is far more apparent to the regulatory agency which compiles statistics on the numbers of such accidents. Moreover, fitting rollover protection to an existing tractor may be an expense which farmers feel they cannot afford. The most effective solution to this problem is for manufacturers to build-in rollover protection at the time of production. This requires government regulation. Such regulations are now in place, and many of the tractor accidents which still occur involve tractors too old to be covered by the rollover protection requirements.

It should be noted that even if the workers compensation system were extended in such a way as to include the self-employed the

situation would not be significantly different. (Many farmers are already covered by personal injury insurance policies; Low and Griffith 1993.) The self-employed worker would then be in a position similar to that of the very small employer; for the reasons discussed in the preceding section, insurance premiums could not be expected to have any effect in promoting their safety.

Even if such workers compensation policies for the self-employed were to include a no-claim bonus this would be unlikely to function as an effective safety incentive. Consider the case of car accident insurance. Although drivers with a good record receive a no-claim bonus, a moment's introspection will reveal that we do not drive with this in mind and that therefore we do not drive more safely than we would in the absence of this incentive. The major effect of the no-claim bonus is to discourage people from making claims following minor accidents. In practice, the incentives to drive safely are, first, our own foresight of the possibly disastrous consequences of unsafe driving and, second, the activities of those responsible for the enforcement of preventive regulations, the police. In the case of the self-employed farmer, if foresight of the possibility of injury does not serve as an incentive to take safety precautions, for example by driving a tractor in a safe manner, it seems unlikely that the possibility of losing a no-claim bonus will be any more effective.

Contracting

In some circumstances major enterprises subcontract much of their work to smaller concerns. The subcontractor may hire employees directly, but these workers are not the employees of the principal enterprise. The subcontractor, not the principal enterprise, is therefore responsible for paying the compensation costs. On the other hand, the principal enterprise may exercise so much control over the subcontractors and their employees that it, rather than the subcontractor, is in the best position to ensure the safety of workers. In these circumstances compensation premiums can play no part in ensuring worker safety.

Consider the case of the NSW Forestry Commission. The Commission sells to timber mills the right to log in state forests. The mills engage subcontractors to cut the timber and these subcontractors may take on employees to form small teams of chainsaw operators. Despite the lack of any direct employment relationship

between the Commission and these chainsaw operators the Commission exercises close control over their work in the forests and is in the best position to ensure their safety.

Tree felling with chainsaws is a dangerous business and in years past numerous contract workers were killed annually in state forests. The Commission has been working for many years to train chainsaw operators in the safe use of their machines and finally, in 1987, made it compulsory for all timber workers using chainsaws in state forests to hold accreditation certificates, to demonstrate personal competence in the safe use of chainsaws. This has been a major factor in the decline in accidents in timber harvesting which has occurred in recent years.

What prompted the Commission to take this action? First, there was a genuine concern among senior forestry staff about the deaths. As one put it to me: 'I remember seeing an ambulance carrying the body of a 17-year-old. He had been put on by a saw mill the day before. He'd gone out and bought a chainsaw and was killed when the very first tree he cut fell on him. That sort of thing gets to you'.

But apart from personal motivations there were others. In about 1970 the Commission was faced with rising compensation costs among its own direct workforce, employed among other things to supervise the contract workers. The response was to begin training programs for these direct employees. The latter then began to notice and complain about the unsafe practices of contract workers, which led to pressure on the Commission to introduce training for these workers as well. Finally, there was the pressure of government regulation. Over the years the Commission has had a great deal of contact with the safety inspectorate over the regulation of forestry workers. Moreover, at law the Commission is legally responsible for the safety of all forest workers because of the fact that it controls their workplace, and on at least one occasion it has been prosecuted (unsuccessfully) for failure to maintain a safe workplace (OH Newsletter 287).

These, then, are the main factors which have led the Commission to take an active interest in the safety of contract workers in state forests. It is true that compensation pressures in relation to their own direct employees started the ball rolling, but the Commission experiences no direct financial pressures in relation to the safety of contract workers. It is the moral concerns of forestry staff coupled with the legal responsibility that the Commission bears which accounts for the focus on safety maintained by the Commission in recent years.

Rare but catastrophic events

Where injury is frequent and routinely compensated, the costs may well generate pressures to improve workplace safety. But where death and injury are rare, even though perhaps widespread when they do occur, they do not provide ongoing financial incentives to focus on safety. Take the case of coal mine explosions. Most mines have never had an explosion, and several years may elapse without a single explosion anywhere in the Australian coal fields. When an explosion does occur there are certainly costs, compensation and otherwise, but as the years roll by, these costs fade from ledger books and from memories. In these circumstances prevention of explosions depends to a considerable extent on the activities of the inspectorates, either themselves ensuring that mines are in compliance with relevant regulations or at least ensuring that self-regulation is effective.

Let us consider two further examples of more direct relevance to readers of this book, many of whom may work in large buildings. First, lift failure. Lift cables must be carefully and frequently inspected since a cable failure could result in the death of a liftful of people. There has never been such a disaster in Australia and so the compensation costs which would be generated by such an event do not draw attention to themselves. Building owners normally enter into contracts with maintenance companies to inspect and maintain their lifts, and left to themselves numbers of them would probably seek to save money by cutting back on the frequency of these inspections or by cancelling contracts altogether. There is thus a vital role for government inspectors in ensuring that lift cables are properly maintained. Unfortunately lift inspections by OHS agencies are being cut back and in some cases abolished. One lift inspector I spoke with told me how in his jurisdiction lifts are now only subject to inspection at the time of installation and if a lift is refurbished. He described how he had been called to inspect a refurbished lift and chose to check an adjacent lift as well. He found that the cable on this second lift was dangerously frayed, despite the fact that the lift owner had a maintenance contract with the lift's manufacturer. In another case he investigated, in which a man's foot had been badly crushed in a goods hoist, he discovered that the firm concerned had no maintenance contract at all, its justification being that the hoist was only used two or three times a week. He immediately issued the company with a notice requiring it enter into a maintenance contract. The health and safety manager

of one large company I interviewed told me he did not know who owned the lifts in his building and had not thought about lift safety. He had, however, developed an escalator safety policy because the company had had several accidents on its escalators. Lift safety is clearly an area where government inspectors are necessary, either to inspect lift cables themselves or to ensure that lift owners enter into effective maintenance contracts.

Fire in large buildings is another rare but potentially catastrophic event. Large buildings normally have fire alarms and sprinkler systems. These systems should be tested regularly. Here again, the fact that most buildings never catch fire means that owners, left to themselves, may not do this routine testing and need to be prodded into action by government agencies.

Dangerous occurrences

There are numerous dangerous occurrences which do not result in death or injury and thus do not generate compensation claims but which must be taken seriously to ensure that there is no recurrence. Explosions, spillage or seepage of dangerous chemicals on to roads or into the atmosphere, toppling cranes, construction collapses are all indicators of unsafe practices which on some future occasion may cause widespread death or injury. In many cases the dramatic nature of such events and the negative publicity which they generate will be enough to compel employers to take appropriate action. But in other cases there is a need for investigation by the prevention agencies to ensure that the right lessons are learnt and correct procedures adopted.

Hazardous substances

The control of hazardous substances is another area where compensation pressures can play little or no part. Many workplaces contain dangerous chemicals and other materials which can result in poisoning, cancer, explosions, skin and eye damage and so on. Yet these hazards generate relatively few compensation claims. In New South Wales, for example, about half of one per cent of all injury claims result from 'contact with chemicals or substances' (WorkCover Workers Comp. Stats, NSW, 1991–92, p. 52). There are separate data on the number of disease claims, but the number

arising specifically from contact with hazardous substances is not recorded. It is clear from the way the data are coded, however, that at most about 7 per cent of disease claims could possibly have arisen in this way (ibid. pp. 76–7).

We will see in Chapter 8 that on occasion unions have been crucial in drawing employers' attention to these hazards and forcing them to do something about them. This is also an area where regulation and activity by regulatory agencies is vital. Hence the importance of hazardous substances regulations to which governments have devoted so much energy.

One implication of this argument is worth noting. Regulatory authorities have generally placed a higher priority on the development of manual handling regulations than they have on hazardous substances regulation. Manual handling regulations have, as one of their major objectives, a reduction in the number of back injuries and other sprains and strains caused by lifting and handling. In New South Wales in 1991–92 such injuries constituted over half of all compensation claims. If compensation costs were at all effective in drawing employers' attention to OHS problems one would have thought that there would be no need for such regulation. One of two conclusions seems inescapable. Either the priority which the authorities have placed on drawing up manual handling regulations has been somewhat misplaced, or the regulations were necessary because compensation costs do not effectively draw employers' attention to manual handling matters. The latter possibility is particularly significant, for if compensation costs are not an effective motivator in relation to manual handling injuries they are unlikely to be effective in preventing other types of injury.

Conclusion

In this chapter we have seen that there are numerous specific circumstances in which the compensation system is unable to deliver safety incentives. At times, in these circumstances, union pressure, publicity and the personal concerns of top managers contribute to safeguarding workers. But often, government regulatory activity is essential. While regulation does not of course guarantee worker safety, it offers in many of these cases the most promising approach. Insofar as regulation fails to protect workers in these situations, this is an argument for improving the regulatory system rather than for relying on economic incentives to fill the gap.

5

Other 'safety pays' arguments

Chapter 2 examined the free market approach which assumes that the wage costs involved in attracting workers into dangerous industries provide an incentive to employers to improve safety. It was argued there that the labour market does not in fact function in this way, and that this is a case of market failure necessitating some form of market restructuring or more direct government intervention. There are, however, other versions of the free market argument which have gained quite wide currency among health and safety practitioners to which we must now turn. These versions also hold that it is in the employer's interest to provide a safe workplace, independently of compensation costs or any other government-imposed financial incentives. Taken to its logical conclusion this approach implies that we can do away with government regulation; all that government need do is point out to employers that 'safety pays', and economic self-interest can be expected to do the rest. While very few would seriously suggest taking the arguments to the extreme in this way, they do raise the possibility that there are financial considerations other than the cost of compensation which provide employers with an incentive to do something about worker safety.

Two qualifications

There are at least two qualifications to this whole approach which need to be stressed at the outset. First, most of these arguments do

not extend readily to cover questions of health. In particular, most provide no incentive for employers to worry about illnesses with long onset times, such as cancer, or other conditions which develop gradually, such as noise-induced hearing loss. There are few if any costs to employers arising from such ailments, other than compensation costs, on occasion. But compensation costs are not at issue here; what is at issue is whether there are broader, non-compensation costs with the potential to attract management attention. From this point of view, while it may be true in a variety of circumstances that safety pays, it rarely pays an employer to be concerned about the long-term good health of employees.

Consider by way of illustration the case of coke oven emissions at BHP in Wollongong in the later 1970s. These emissions were by that time known to be carcinogenic, and some of BHP's coke oven workers had died of cancer. BHP had settled a few cases out of court with payments to the families of deceased workers, but had not admitted any liability (Fisse and Braithwaite 1983, p. 86). These payments totalled some hundreds of thousands of dollars. The cost of properly sealing the ovens by replacing their doors was estimated to be tens of millions of dollars. BHP told a 1982 parliamentary committee of inquiry that the doors on the two oldest and leakiest batteries of coke ovens would not be replaced (House of Representatives 1982, p. 123). It intended to operate the oldest battery for the next two years until the construction of a new and more productive battery was completed. The other battery was of such poor design that nothing could be done to reduce its emissions. It was described by the unions as a 'fume-leaking monster', a description which the committee endorsed. BHP's intention was to continue operating this battery for some years to come. Here, then, is a case where it was clearly not in the company's economic interest to take decisive action to eliminate a serious health hazard. None of the safety pays arguments to be discussed below alters this conclusion in any way.

The second qualification or objection which must be mounted to any blanket argument that safety pays is that the law itself recognises that there may be situations in which safety does not pay; that is, where it would be impracticable from a financial point of view to expect employers to guarantee the safety of their employees. The point is that most OHS law requires employers to provide a safe workplace or to observe the relevant regulations only 'so far as is reasonably practicable'. The meaning of this phrase will be discussed in Chapter 7, but for present purposes it is enough to

note that the judgement of what is reasonably practicable implies some form of cost-benefit analysis (Dawson et al. 1988, p. 15). By way of illustration, consider the following case concerning the English Metalliferous Mines General Regulations (Marshal v Gotham, House of Lords and Privy Council, AC, 1954, pp. 360–78). This legislation specifies that 'the following general rules shall, so far as may be reasonably practicable, be observed'. One such general rule requires that 'the roof and sides of every travelling road, outlet, and working place shall be made secure'. In the case in question an employee in a gypsum mine was killed in a roof fall. Normal practice was to inspect the roof by tapping it with a hammer and, when the sound indicated that it was unsafe, to bring it down. Such an inspection had occurred just prior to the accident. However, the fall was due to the presence of an unusual geological condition known as 'slickenside' which had not revealed itself in the mine for twenty years and for which there was no known means of detection. It was held, on appeal to the House of Lords, that it was not reasonably practicable for the company to have secured the roof, and that it was therefore not liable for the man's death. Their Lordships recognised that it would have been possible as a routine practice to support the roof at regular intervals with wooden props, and they acknowledged that this would have greatly reduced the likelihood of roof falls. But this, they argued, would have involved the company in a great deal of extra cost. They did not, it should be noted, conclude that this extra cost would have made mining uneconomic. It was simply that 'the time, trouble, and expense of the precautions suggested are disproportionate to the risk involved'. For this reason it was not 'reasonably practicable' to expect the company to comply with the regulations. Here, then, is another case where safety very definitely did not pay.

These two qualifications should be borne firmly in mind in what follows.

The total cost approach

The first version of the safety pays argument to be considered here concerns the total cost of accidents. The argument is that the cost of compensation claims is really only a small part of the total cost incurred by employers as a result of workplace injuries. A study conducted in Queensland revealed that the total cost of injury to employers was at least seven times the compensation costs (Mangan

1991). Other estimates suggest that the true costs may be up to twenty times higher (Oxenburgh 1991, p. 14). The hidden costs include damage to material and equipment caused by an accident, lost production, time lost by other employees responding to the accident and the cost of training replacement workers. In some cases accidents are followed by strike action by other employees which further contributes to costs. All these costs are uninsured and must be met by the employer. It is thus the hidden costs which in theory provide a far greater incentive than compensation costs for employers to minimise the incidence of injury. The problem is that employers are often not aware of these hidden costs (Schaapveld 1993, p. 5). While all large companies record injury statistics and can produce figures on the cost of claims, they do not often keep figures on the cost of equipment damage or other accident costs. Unless safety specialists within an enterprise are in a position to bring these costs to the attention of management, they cannot function as safety incentives. We shall return to this point in Chapter 11.

However, some managers I interviewed were acutely aware of these hidden costs. In the case of one export manufacturing firm, the general manager explained that competition with the Japanese had driven the company to cut costs to the bone and in particular to cut its workforce to an absolute minimum. The result was that unexpected absenteeism for whatever reason affected the production program adversely. 'We are a lean manufacturing setup where every man counts', he said. 'We cannot afford to operate a business with absenteeism.' He told how a fitter had broken a little bone in his hand at the weekend and how this had substantially interrupted the firm's maintenance program. It was the disruption costs of accidents and not the compensation costs about which this general manager was most concerned and which drove his firm's safety program.

The manager of a steel casting firm told me that if one skilled and experienced worker is off for any reason they must put on two casuals to get the same output. The manager of a contract cleaning firm made the same point. His cleaners usually worked in several different buildings each night. If one was away a replacement usually had difficulty finding his or her way around and it took two replacement workers to get the job done. In many cases workers are absent because they are on sick leave or taking annual holidays. But, where work injury is a significant cause of absence, this may

well motivate management to take seriously questions of health and safety.

In one very safety-conscious firm, which has reduced its number of lost-time injuries to insignificant levels, the main cause of unexpected absences is injury occurring off the job and sickness having nothing to do with work. The company is now trying to build a 24-hour total safety focus among its employees. It also runs campaigns encouraging its employees to improve their lifestyle by exercising and not smoking.

Finally, the health and safety manager of one multinational with processing plants in various Third World countries where safety regulation is almost non-existent explained that the company nevertheless maintained the highest safety standards in these plants, in part because of the years of training which must be provided for plant operators and the costs involved in training replacement operators.

To conclude this section, the hidden costs of accidents are potentially powerful motivators. But they cannot function as safety incentives while they remain hidden. It is only when they are recognised by management that they can have this effect. The role of safety specialists within the company is critical in bringing these costs to management attention.

The productivity argument

A second 'safety pays' argument which is often heard is that attention to safety pays off in terms of increased productivity. According to Mathews (1993, p. 49) 'investment in good health and safety conditions has paid off in terms of productivity [for many firms]'. Again, according to the managing director of one large multinational operation in Australia, safety is 'the key to productivity and profits' (ibid, p. 48).

Despite these bold assertions the connection between safety and productivity is highly problematic. Any claim by an enterprise or industry that it has achieved increased productivity by attending to questions of health and safety must be treated with the greatest caution. The alleged connection between safety and productivity in the NSW coal industry over the last few years, for example, disappears entirely on close inspection (see Chapter 10). But more than this, increased productivity sometimes appears to be at the *expense* of safety. In Great Britain in the 1980s there was an increase in

accident rates in the manufacturing and construction industries. The rate of increase was particularly high where pay was low *and productivity was increasing most rapidly* (Gunningham 1993, p. 10, citing Dawson et al. 1988, p. 246).

Furthermore, it has been shown that injuries often occur when workers are under pressure to restore production which has temporarily ceased. (Nichols and Armstrong 1973). In these circumstances workers will sometimes take shortcuts to get the process working again, to keep the system going in order to satisfy management. This will be particularly true where pay is linked to output. Workers then have a direct financial incentive to take what ever shortcuts are necessary to get production going again. Here, again, productivity is very much at the expense of safety.

Finally, to draw on my own research, in one abattoir I visited employees were working without the usual protective equipment designed to prevent them cutting themselves because this equipment was perceived by management as slowing the pace of work and thus lowering productivity.

There are, however, situations in which improved safety does seem to be associated with increased productivity. In order to understand the connection we need to bear in mind the precise meaning of the term productivity: output per worker. (Economists speak of the productivity of both labour and capital but in most discussions of the relationship between safety and productivity it is the productivity of labour which is at issue.) There are various ways in which output per worker can be increased, which are discussed in the following sections.

Increasing productivity: working harder

The most obvious way to increase productivity is by getting workers to work harder. But there is little reason to think that any productivity increases which result from getting workers to expend more effort will be associated with safety improvements. If anything, as mentioned above, bonus systems of pay which encourage workers to work harder are likely to impact negatively on safety.

Increasing productivity: reducing time lost

A second way of increasing productivity is to increase the hours actually worked by reducing time lost in various ways (Oxenburgh 1991). A single accident may result in considerable downtime for a number of workers or even for a whole enterprise. Moreover, in

some industries injury may trigger an industrial dispute with further lost time. Lost time means lost production and hence a reduction in the output per worker. Thus OHS improvements which reduce lost time raise productivity. In this matter, then, there is a clear connection between safety and productivity. Note also that time lost as a result of accidents was conceptualised earlier as a component of the total cost of injury. There is, in other words, an overlap between the total cost approach and the productivity approach.

Increasing productivity: worker participation

A third way in which output per worker can be increased is by eliminating the many little inefficiencies which are built into jobs—poorly-designed tasks, procedures which are not well connected and so on. According to Mathews 'employees work with these inefficiencies silently, regarding them as a small victory in the endless employer-worker war . . ., and sometimes exploiting them to catch small moments of respite in an otherwise relentlessly paced and repetitive working day' (1993, p. 46). 'What is the circuit-breaker that will encourage workers to divulge these inefficiencies and make employers act on them?', he asks. His answer: a policy of worker participation, involving workers in decision making about their work, a policy perhaps of self-directed work groups. In these circumstances, employees feel encouraged to come forward with suggestions. Mathews argues that, where managements are committed to such policies, workers will begin by making demands concerning job security and workplace health and safety. If these are acceded to speedily and effectively workers are then likely to come forward with suggestions for making the work more productive and efficient. Here then, at last, is a real connection between safety and productivity. But it is not a direct causal connection. It is not that improving health and safety automatically increases productivity. Rather it is that, when management responds in good faith to workers' health and safety concerns, this builds an atmosphere of trust which encourages workers to make suggestions about increasing the efficiency of the work process and hence the output per worker. It is the commitment to worker participation, rather than to health and safety, which is responsible for increased productivity. So it is not that *safety* pays. Worker participation pays and safety expenditure is, in a sense, part of the price which management must pay to secure this outcome.

This analysis provides health and safety practitioners with only

a very indirect way of drawing management attention to health and safety. Moreover, there are not many circumstances in which it is likely to be an effective argument. To advocate increased worker participation is to advocate a transformation of management style. This is not something management will do lightly, and it will take more than the urgings of health and safety practitioners to persuade it to embark on such a course. Clearly, however, where others are urging policies of worker participation, health and safety practitioners would do well to join forces with them. This is precisely what Worksafe Australia has done in its best practice initiative to be discussed shortly.

Increasing productivity: technological innovation

A fourth way in which output per worker can be increased is by introducing new equipment, machinery or technology. To take an extreme example, output per worker in a modern mechanised coal mine is much higher than it was in the nineteenth century when mining was pick-and-shovel work. Ironically, this higher productivity of the modern miner is associated with less physical effort. Modern mining is also a lot safer than it was in the nineteenth century. Of course, noting associations between safety and productivity on such a grand scale does not provide health and safety practitioners with much leverage: the trend towards mechanisation and ever more powerful technology is driven by production imperatives and safety is simply an incidental by-product.

However, this observation provides the clue to a very useful connection between safety and productivity on a much smaller scale. Many injuries result from poorly-designed equipment or the absence of mechanical aids. Providing the appropriate aids or improving the equipment design may both reduce the likelihood of injury and increase the output of the worker. For example, the packaging of proof coins at the Royal Australian Mint

> required an operator to place coins into plastic inserts by hand. The holes in the packaging are a tight fit and the operator was required to force coins into the holes with finger pressure. This resulted in occupational overuse syndrome in a number of employees. The problem was solved by re-designing the system of work. The method of coin insertion was adjusted by the design of an air powered bench press. The plastic insert that was placed over coins by the fingers is now inserted by a hydraulic press. This piece of machinery has increased productivity in this area by fifty per cent and no new claims for workers' compensation have been made since its implementation.

> This innovation won the 1991 Comcare Prevention Award. (Ergonomist Australia, October 1993, quoted in ACT RSI News, January 1994, p. 5)

The Victorian Institute of Occupational Health and Safety at Ballarat University College collects examples of such technical solutions to OHS problems. An analysis of its database shows that 'of the 41 manual handling solutions it contains, 19 (46 per cent) gave reported productivity benefits in addition to injury reduction' (Mathews 1993, p. 51).

Clearly not all OHS problems are susceptible to this kind of solution. More than half of the manual handling solutions mentioned above involved *no* productivity gain. And even if there are such gains there is no certainty that they will be sufficient to justify the expenditure on new equipment. It may only be in conjunction with reduced injury costs that an innovation becomes cost-effective. Nevertheless, where productivity gains can be demonstrated, this is likely to be an effective way of getting management attention and even action on OHS problems.

To sum up, there is no assured connection between safety and productivity. The pursuit of productivity gains does not necessarily lead to greater safety; indeed it may sometimes be at the expense of safety. Furthermore, the pursuit of safety does not necessarily increase productivity. The alleged connection between safety and productivity is so tenuous that it cannot possibly be said that 'this is the way to go', as some of the advocates of this approach maintain. This version of the safety pays argument is far too weak to provide a new basis for OHS policy.

Worksafe 'best practice' case studies: an analysis

Worksafe Australia promotes the view that safety pays as one of its strategies for focussing management attention on OHS. At the time of writing it has produced a set of six 'best practice' case studies purporting to show that best practice in the area of OHS enhances competitiveness and profit. Worksafe draws on several of the arguments outlined above. A discussion of these studies thus provides an opportunity to concretise some of those ideas and to evaluate them in a rather more detailed way.

Worksafe's OHS best practice initiative must be seen in the context of the broader best practice program run by the federal Department of Industrial Relations and the Australian Manufacturing Council. The aim of this program is to increase the competitiveness

of Australian industry by adopting best practice generally. Central to this approach is a new form of industrial relations, built on cooperation between management and workers rather than conflict, with workers participating in decisions traditionally thought of as the exclusive prerogative of management. The aim is a new workplace culture, where workers and management work together for the benefit of the enterprise as a whole and all those who work there.

Aligning itself with this approach, Worksafe argues that one of the best ways for a company to promote this new workplace culture of cooperation is to begin by involving workers in the management of OHS. Setting up OHS worker/management committees aimed at solving OHS problems models the new industrial relations. Provided employers take these committees seriously, the process empowers workers, encourages them to take initiatives in identifying problems and builds trust between the parties. These changes inevitably flow on to affect the entire industrial relations culture of the company. Moreover, since improved OHS benefits workers directly, a focus on OHS provides the best opportunity for management to overcome the initial hostility and suspicion with which proposals for worker involvement are likely to be met. In short, Worksafe argues that a focus on OHS, using a participative approach, serves to build a more cooperative workplace culture which in turn leads to greater productivity and profit. This is the worker participation argument described in the previous section. It is the first of two ways in which, Worksafe argues, safety pays. The second way is far more direct: improved safety performance reduces the total costs of injury in all the ways described earlier—reduced disruption, fewer safety strikes, less damage to machinery and, of course, lower compensation costs.

So much for the theory. What do Worksafe's six case studies actually demonstrate? We look very briefly at each in what follows.

Hendersons Automotive

In 1985 the company was in crisis with high absenteeism, high turnover, a high injury rate and low morale. In addition quality was suffering with significant numbers of customer returns. The company was heading for bankruptcy. The crisis then was not simply one of high injury costs but of low productivity generally. Management style was authoritarian and workforce participation and consultation were non-existent. New management was appointed and decided to move to a participatory style. The starting point was OHS, precisely because this was an area where workers would

benefit most directly and changes would be easiest to initiate. Consultation was the centrepiece of OHS policy. The result has been the empowerment of workers, an atmosphere of trust, and big drops in absenteeism and annual labour turnover as well as the number of LTIs. Most importantly there has been a quantifiable improvement in quality of product and profitability. Hendersons, then, is a model for the way in which safety can pay, demonstrating both the direct and indirect approaches identified by Worksafe.

Danum Engineering

In 1986 Danum was another company in crisis: compensation premiums were skyrocketing, morale was low, time lost was affecting production, and one of its workers was nearly killed. But, unlike the case at Hendersons, the crisis was largely one of poor OHS performance. In response, management decided to tackle the problem using consultative procedures, health and safety committees and the like, and by encouraging workers to take responsibility for identifying and solving OHS problems. The result has been a reduction in injury rates and less time lost. There has also been a change in the workplace culture with workers more willing to raise issues with management. As one company director remarked: 'We've created a culture where people aren't scared to tell the boss they've slipped over and hurt their back because they know that it'll be investigated, and possibly it'll prevent one of their mates from slipping over and hurting *their* back'. However, the study reports no other productivity or quality improvements. Thus at the time of the study safety had contributed to profit by reducing the total cost of accidents, but not by enhancing productivity or efficiency in any other way.

Australian Newsprint Mills' Tasmanian plant

In 1985 the firm faced collapse. Antiquated equipment meant low productivity and poor quality. Moreover, there were high compensation costs ($1.2 million per year) and overstaffing. Major change was necessary. OHS was made a priority area and the consultative approach was adopted. But the main change was an enormous capital works program to modernise the mill. The company has spent on average $40 million per year since 1985 in upgrading equipment. At the same time it reduced its workforce from 1400 to about 500. The new, state-of-the-art technology increased productivity from 13 employee hours per tonne of paper to 4.5 employee hours.

This case provides relatively little support for Worksafe's claims. There was a dramatic drop in the total number of injuries and total injury costs, but this was largely a consequence of the big cut in the workforce. Most of the safety data presented in the study do not take account of this reduction in employee numbers and so are essentially uninterpretable. The one exception is the lost-time injury frequency rate which does show a decline. The new technology played a part in this decline since it is inherently safer than the old. Presumably, attention to OHS also played a part. Finally, it must be stressed that the very substantial increase in productivity which the mill has experienced has nothing to do with improved safety and everything to do with the state-of-the-art technology installed. Any suggestion that the productivity gains at the plant were due to a focus on health and safety would be entirely fallacious.

Woodside-KJK

This is a consortium involved in the construction of an LPG plant. 1985 was a year of stocktaking as the project moved into a new phase. Previous years had seen an unacceptably high LTI rate and two fatalities. A manager comments: 'Much soul searching followed. These deaths and related industrial stoppages on safety issues caused significant disruption and brought more focus on the inter-relationship between safety and profit'. Then, over a four-month period there were eighteen more incidents and accidents and one more death. Confidence in crane safety dropped and there were further industrial stoppages over safety issues. Finally, pressure was mounting from the head office of Shell, one of the consortium members. Under the Shell International Safety System, chief executives are invited to meet with a committee of the board of directors in the event of a fatality. As one senior manager points out, 'this has a very big effect'. A decision was made to redesign the whole approach to safety. Participation by worker representatives was one aspect of this new system, but only one. Training, tighter control over subcontractors and total quality management were also involved. The result has been a big reduction in the number of lost-time injuries and time lost due to disputes over health and safety issues, leading to improved performance and profit.

This case study makes no claim that worker participation has led to productivity improvements. The only claim is that a focus on OHS has led to a reduction in the total cost of accidents and, in particular, costs due to industrial stoppages. This is by no means a

complete vindication of the Worksafe argument. What the case seems to demonstrate more than anything else is the importance of union pressure in directing management attention to OHS. In a sense this is all part of the argument, since it is the unions' ability to exert cost pressures which give them their leverage. But these cost pressures are not automatic. They are applied only where workers are sufficiently organised and resolute to exert them.

Du Pont's Girraween plant

Ten years ago the plant was threatened with closure because of cost and slow delivery times. Since then quality, cost and delivery times have all been improved, based in part on policies of employee participation. Safety performance has apparently been good for a long time, and the study provides no evidence that safety has actually *improved* over this time or that a participatory approach to safety has been responsible for the cooperative culture which exists at the plant. Thus the study does nothing to support Worksafe's claim, that greater attention to safety can enhance productivity.

Stanwell Power Station project

The power station is being constructed by the Queensland Electricity Commission (QEC). The main catalyst for improving OHS was the passage of the *Workplace Health and Safety Act* in 1989, placing responsibility for safety on the principal contractor. This led management to set itself the goal of no fatalities during the course of the whole project, a goal which had never been achieved on previous power station construction projects. The main strategy of the QEC for achieving this goal was an OHS skills training program for all workers. The result is that the site is still fatality-free, although the lost-time injury frequency rate is not much below the industry average. There has been a big reduction in the time lost due to industrial disputes from all causes. This case appears to provide little support for the Worksafe thesis. In fact it is a powerful vindication of the importance of regulation since it was the new legislation which really stimulated change in the area of OHS.

Conclusions from the six studies

In one case, Hendersons, the Worksafe model was consciously adopted. Management focussed on OHS with the *motive* of building a wider culture of cooperation, and this culture has yielded both

improved OHS (with consequent cost reductions) and wider productivity gains not specifically related to OHS. In the cases of Danum, Australian Newsprint Mills (ANM) and Woodside-KJK it was the concern about the total cost of accidents which motivated the new focus on OHS. In two of these cases, Danum and ANM, the OHS focus has contributed to a new cooperative workplace culture. There may possibly have been some resulting productivity gains, but these are not quantified or demonstrated in the studies. In the case of ANM the productivity improvements which have undoubtedly occurred are a result of technological change, while the productivity improvements at Woodside-KJK stem largely from the fact that a reduction in the number of accidents and incidents has meant less time lost in safety disputes. Finally, the Du Pont Girraween study presents no evidence that safety pays, while the Stanwell Power Station study demonstrates more than anything else the importance of legislation in focussing attention on safety.

The Worksafe studies thus lend only qualified support to the various safety pays arguments. A focus on safety does appear to promote a more cooperative culture, but the studies tend to assert rather than demonstrate that this translates into productivity increases. The studies also demonstrate that a focus on safety cuts costs, the most obvious being the compensation costs associated with lost-time injuries. However, even this must be qualified by the observation that none of the studies considered the possibility that the reduction in LTI frequency rates might be due to the processes of claims management and claims suppression discussed in Chapter 3. The studies contain some evidence of the operation of these processes, and it is a safe bet that claims management contributed substantially to the reductions in LTI frequency rates which the studies record. Given the equivocal nature of all this evidence, it would be unwise for Worksafe or any other authority to place exclusive reliance on 'safety pays' arguments in seeking to promote worker health and safety. But, by the same token, the evidence, in particular the Hendersons case study, does show quite clearly that safety pays in some cases. It is therefore a sensible strategy for OHS agencies to seek out those cases, analyse them carefully and publicise the findings.

Other commercial pressures for safety

One of the more striking findings from my interviews was the extent to which leading firms are placing pressure on firms with which

they do business to improve their OHS performance. Firms tendering for contracts are finding that their OHS systems and performance are being increasingly scrutinised, and that in some cases OHS requirements are being imposed on them as a condition of the contract. Firms which can't or won't measure up may miss out on the contract.

Leading firms in the construction industry, for example, now require subcontractors to have safety management plans. They also audit subcontractors from time to time to ensure that they are performing in accordance with the plan. Some take account of the subcontractor's prior safety performance in awarding contracts. (One unfortunate side effect of this is that it provides subcontractors with an incentive to suppress compensation claims, as we shall see in Chapter 9.) The firms taking these initiatives are doing so for good reason. In part they are responding to legislation which holds them responsible for OHS when subcontractors come on site to perform work; in part they are responding to the disruption costs which injury to a subcontractor's employee can impose on the principal contractor.

A further recent development in the building industry is that clients—those who commission the buildings—are imposing requirements concerning the management of safety on the large construction firms themselves. They are making use of 'prequalification criteria' with respect to safety and other matters which must be met before a tender is eligible for consideration (Whiting 1994).

In the chemical industry, one large manufacturer I investigated provides its customers and carriers with guidelines which they must follow. It audits its carriers to ensure that they have adequate safety systems. Carriers who don't measure up don't get its business. The firm also runs a small safety consultancy business and sells its services to other firms. Among those buying its services are its own suppliers, carriers, customers and even a competitor. In this way safety pays not only for those doing business with this chemical manufacturer, but in a very direct way for the firm itself! There is no legislative requirement that this chemical manufacturer impose safety requirements on those with whom it does business. There is, however, a question of reputation. The company prides itself on its own safety achievements and believes that if its chemicals are involved in accidents of any sort its own reputation is tarnished.

Leading firms also impose safety requirements on each other. One very large company which does work on site for its customers,

themselves large companies, finds itself required by many of these customers to have a safety management plan.

An offshore oil producer requires all subcontractors to undergo safety training and to conform to stringent safety standards. I was told that it had terminated the contract of one of its supply vessels because of an unacceptably high number of injuries and incidents. This is perhaps the most dramatic evidence of private sector safety pressures uncovered in this study.

There is another more indirect way in which companies are exerting safety pressures on each other. Standards Australia (SA) has developed a series of quality assurance standards. These are systems for monitoring products and processes which, once in place and certified by the SA, can provide customers with an assurance of quality. Increasingly, firms are requiring of each other that they be accredited as quality-assured businesses. While these assurances are with respect to quality of product and not specifically concerned with OHS performance, they tend in practice to have health and safety implications, according to health and safety managers I spoke with. In part this is because the monitoring of production quality is similar to the monitoring of health and safety performance and companies which have adopted such systems in one area tend to adopt them in others. In part it is because product quality and worker health and safety are sometimes inextricably linked. One example was given to me by a garment manufacturer. If sewing machine needles break and pieces remain in the fabric, this is a product quality problem. But it is also an OHS problem since workers may suffer needlestick injuries. Assuring the quality of the product in this matter has direct benefits for workers.

While these developments within the commercial world are encouraging from the point of view of OHS, their importance should not be overestimated. Much of business is simply not exposed to these pressures. Moreover, scepticism was expressed by some of those I interviewed about whether quality assurance certification, in particular, was simply a cosmetic process, involving a great deal of paperwork but not much substance. Nevertheless, there is no doubt that commercial pressures of the type described above do on occasion generate a focus on safety.

It should be noted that, while these pressures operate entirely within the private sector, governments play a role in creating them. In the case of principal contractors, legislation holding them responsible stimulates their interest in the safety performance of subcontractors. In the case of large chemical manufacturers, the potential

for disaster and the fear that this might provoke stronger regulation provides an incentive for them to ensure that their products are properly handled by all those who come in contact with them. These observations do not, therefore, constitute an argument for the abandonment of regulation.

Conclusion

In this chapter we have seen that it is not possible to claim generally that safety pays. There are circumstances in which it does, and others in which it doesn't. At one extreme, where work is labour-intensive and unskilled workers are plentiful, easily replaced, ununionised and unaware of their compensation rights, employers have no financial incentive to concern themselves with safety. Itinerant fruit-picking probably comes close to exemplifying this situation. On the other hand, where work is capital-intensive and workers highly skilled and not easily replaced, the disruption costs of accidents are far greater, and employers have a considerable financial incentive to attend to safety (if not health). Moreover, attending to safety may have productivity benefits above and beyond simply avoiding the costs of accidents. The problem is that, even in situations where safety does pay, employers are often not aware of this. Indeed, they frequently believe that it does not pay. A survey carried out in 1991 asked environmental managers, health and safety directors and chief executive officers of 98 of the 4500 largest US corporations doing business overseas what prevented their company doing a better job on OHS and environmental issues. Fifty-three per cent cited emphasis on short-term profitability (Gunningham 1993, p. 7). In these circumstances it is up to safety practitioners, particularly those within companies, to demonstrate to management just what the costs of injury are and how, in particular situations, safety expenditure might enhance productivity. In this way financial considerations may at times be harnessed to the cause of occupational safety, although rarely to the cause of occupational health. Finally, while the safety pays argument provides an additional resource for OHS agencies it cannot serve as the principal basis of government policy, and in particular cannot be used to justify a policy of deregulation in the area of OHS.

6

Regulations and regulators

In thinking about the role of the regulatory system in focussing management attention on occupational health and safety it is useful to make a distinction between the regulations themselves and the regulators, whose job it is to secure compliance by employers with the regulations. In the first part of this chapter we look briefly at the nature of regulations and then go on to argue that regulations function as a resource which can be used by inspectorates, worker representatives, OHS officers and others to encourage management to take OHS seriously. In later sections we will look at the activities of the regulators, specifically the inspectorates, and argue that their impact on employers has been greatly underestimated.

The nature of regulations

Let us enquire first as to the nature of the regulations which employers are being asked to comply with. (For a fuller discussion see Emmett 1992; Hopkins 1994c.) Regulation in general is designed to achieve social policy objectives. In the case of OHS, the policy goal is to ensure that employers do not harm their workers or allow them to be harmed. The central problem for the regulation of OHS is that it is not possible to mandate this objective directly—that is, to require that employers not harm their workers—since employers are not necessarily in a position to comply with such a legal requirement. In at least some cases the harm is truly accidental and beyond the control of the employer. In many cases of workplace

death, for instance, it is difficult to establish any real employer culpability (Hopkins et al. 1992); and to hold employers strictly liable and thus subject to punishment for all workplace deaths would be unacceptable.

Because of the impossibility of imposing any outright prohibition against harm to employees, OHS regulation has traditionally made use of prescriptive standards designed to reduce the likelihood of harm. Myriad detailed regulations specify ladder lengths, door sizes, electrical wiring, levels of toxic substances, guards on dangerous machines, scaffolding and so on. But resource limitations made it impossible for inspectorates to enforce this mass of rules and often violations came to light only when someone was injured. Prosecutions for regulatory violations with maximum penalties of a few hundred dollars seemed ludicrously inadequate in these circumstances, particularly if someone had been killed, but this was often the only avenue open to the authorities (Hopkins 1989a).

The Robens revolution

This system came under increasing attack for its cumbersome nature and, beginning in the early 1980s, a new style of legislation (stemming from the 1972 Robens Report in Britain) was progressively enacted in Australian jurisdictions. This supplemented the detailed prescriptive rules—the hope was that it would eventually replace them—by imposing a single overarching duty of care on employers. To provide just one example, the South Australian Act requires an employer 'to ensure, so far as is reasonably practicable, that the employee is, while at work, safe from injury and risks to health'. All other jurisdictions have very similar provisions (for a summary see Brooks 1994). What this meant in practice was not defined in the legislation and employers were supposed to work out for themselves what the general duty requirement meant in their particular case. However, since the enactment of general duty legislation, further subordinate regulations and codes of practice have gradually been drawn up by tripartite groups of employers, workers and government representatives to give employers guidance as to what they might reasonably be expected to do. The subordinate regulations, while theoretically enforceable, are often phrased in such general terms that it would be very difficult to prove that a violation has actually occurred (e.g. 'An employer shall ensure that manual handling, which is likely to be a risk to health and safety, is examined and assessed'—NSW Manual Handling Regulations).

As for the codes of practice, they are not legally enforceable. But they become relevant in prosecutions for failure to ensure the safety of employees. Such prosecutions normally take place only when someone is killed or injured, and in these circumstances the failure of an employer to observe the code of practice can be used as evidence that the employer had not done all that was reasonably practicable to ensure the safety of employees.

What all this does is to reinforce and legitimise the prosecution practices which existed in the pre-Robens period. At that time, violations of prescriptive regulations which had not resulted in harm were regarded as technical violations only and were rarely prosecuted (Braithwaite and Grabosky 1985). Prosecutions for regulatory violations tended to occur only when these violations resulted in harm—death or serious injury. Under Robens legislation, the main offence for which an employer can realistically be prosecuted is failure to ensure the safety of an employee as far as reasonably practicable. Clearly, harm to the worker is the prima facie evidence that an employer has failed in this duty. In the absence of such evidence it is difficult to imagine a successful duty-of-care prosecution (except where there are patently and dramatically dangerous occurrences). Thus Robens legislation reinforces the earlier tendency not to prosecute violations where there is no resulting harm.

On the other hand, where it is reasonably practicable for an employer to secure the safety of employees, and yet a worker is harmed, the employer can be presumed to be in some degree culpable. In these circumstances parliaments have chosen to set high maximum penalties, well in excess of $100 000 in most jurisdictions, and courts have responded by imposing much higher penalties than under earlier legislation. This encourages prosecution in cases where an employer causes harm in culpable fashion. The impact of these prosecutions will be dealt with in Chapter 7.

Self-regulation?

The Robens approach has often been described as one of self-regulation. The idea that employers are responsible for working out how to achieve a safe workplace is one aspect of this self-regulation. Another is that workers are given a greater role in ensuring their own health and safety. In all states the new legislation sets up worker/management consultative committees where employees can raise problems and seek solutions, in cooperation with management. Some state Acts also allow for groups of workers to appoint

representatives who then have certain legally specified rights, including the right to order work to stop where a particularly dangerous situation is discovered.

In what sense is all of this self-regulation? There are of course varieties of self-regulation; Rees (1988) distinguishes three. First, total self-regulation or, as he calls it, voluntary self-regulation, in which an enterprise, industry or profession establishes codes of practice and enforcement techniques quite independently of government. Lawyers, doctors and advertisers, for example, have historically practised voluntary self-regulation in this sense. Second, mandated full self-regulation, in which the government requires business to establish a regulatory system with the details of the regulations and the methods of enforcement determined by business but usually subject to approval by state authorities. Finally, Rees speaks of mandatory partial self-regulation wherever business is responsible for specifying at least some of the rules and/or carrying out some of the enforcement. On these definitions the regulatory regime introduced in Australia in the early 1980s involves mandatory partial self-regulation: the overriding regulatory requirement is government-decreed, as are a number of the subsidiary regulations, but the details of just how to achieve workplace safety are ultimately the responsibility of the employer. In the absence of injury, enforcement is largely a matter for the employer and employees, but where serious injury occurs the government steps in to prosecute (see also Dawson et al. 1988).

The notion of mandatory partial self-regulation is clearly such a restricted notion that it hardly qualifies as self-regulation. For this reason the chief executive of Worksafe has suggested the abandonment of the term and its replacement by 'co-regulation'—regulation by both government and industry (Emmett 1992, p. 295).

Regulations as a resource

Distinguishing regulations from the activities of the regulators, as we have done here, enables us to stress an important feature of regulations, namely that they are a resource, which is available to all those seeking to improve workplace health and safety. There are at least three groups of people for whom regulations can function as a resource: government inspectors, worker health and safety representatives, and company health and safety officers and managers. All these people have an interest in ensuring worker health

and safety, and for all of them the existence of regulations and codes of practice provides a vital means of drawing management attention to OHS. The point is obvious in the case of the inspectorate. It is perhaps less obvious, but equally important, in the case of company safety personnel and worker safety representatives. When I asked one company health and safety officer how he got management to take OHS matters seriously he simply pointed to the regulations on his shelf and said: 'My little friends here are my best argument. I use the legislation quite successfully. If I can point to breaches of specific codes or regulations then I get action'.

Pointing out that the organisation is not in compliance with certain regulatory requirements can impact on management in various ways. Many managers have a general disposition to behave in a law-abiding way, and to point out to them that they are in violation of the law is enough to bring corrective action. But, beyond this, to be in a state of non-compliance makes them potentially vulnerable to legal action. If management is on notice that some state of affairs is unsafe and does not take reasonable action to abate the hazard, then in the event that a worker is injured the firm is liable to prosecution. Individual managers who knew of the danger and did nothing about it are also liable. This is a potent resource for OHS specialists: the fear of personal liability is a profoundly important motivator, as I discovered in my interviews (see Chapter 7). One OHS officer I spoke with makes company managers aware of this situation by circulating press cuttings about managers in other companies who have been personally prosecuted for failure to concern themselves with worker health and safety. 'I don't threaten them with prosecution', she said, 'but I would be silly not to make them aware of this possibility'.

Worker safety representatives can use this situation just as effectively. As one explained to me, once he has pointed out to managers that they are in violation of some requirement, he knows and they know that they are personally liable in the event of injury and he can be sure of getting the necessary action. For him, the legislation provides a framework which legitimises the requests he makes to management and provides him with a powerful weapon in the struggle to achieve safer working conditions.

But non-compliance with codes or regulations can expose a company to legal action even in the absence of any harm to a worker. Health and safety officers and worker safety representatives can call in inspectors who can impose prohibition and improvement notices on companies. These notices not only raise the spectre of

prosecution if they are not complied with but the mere issuance of such a notice is regarded also by some managers as a smear or a blot on their reputation. The prospect of even such a relatively minor brush with the authorities is a sufficient motivation for these managers to comply.

Notices are particularly effective when they come to the attention of the chief executive officer. One OHS manager I spoke with said that when his managing director gets an improvement notice he is called in and told to 'fix it' and to make sure that there are no other problems involved. This greatly strengthens the OHS manager's hand.

In short, regulation is not simply something imposed on employers by the regulators. It is a resource which can be used by all those concerned with OHS to get management attention and action. This provides an important justification for regulation, quite independent of arguments about the impact of the regulatory authorities. Putting all this another way, inspectorates are not the only enforcers. Those with a special interest in OHS within firms are also actively engaged in enforcing the law on a daily basis. We might describe this process not as self-regulation but as the self-enforcement of regulation. The existence of external regulations is a prerequisite for this internal enforcement activity. This observation was strikingly illustrated in a discussion with the OHS manager of a large airline. He explained how air safety regulations had once been a resource which engineers could use to bolster safety expenditure requests to management. Since the partial deregulation of airline safety these engineers are now having to fight battles with management where previously the existence of regulations would have clinched the issue.

I conclude this section with mention of a South Australian study (Gun 1992) which underlines the importance of viewing regulations as a resource to be used to make workplaces safer. The study looked at 98 cases of serious injury and found that 53 of them could be directly attributed to the violation of specific prescriptive regulations, in the sense that they would not have happened but for the violation. It found that 19 of these violations would have been detected by an inspector of reasonable competence and diligence visiting the worksite on the day before the accident. The study concluded that in the hands of the right people the system of regulations is a powerful resource which, if used to its full potential, might prevent upwards of 50 per cent of all injuries.

Regulatory overlap

OHS regulations overlap in various ways with others kinds of regulation, notably environmental and public health and safety regulations. These regulations are often of greater significance to management than are OHS regulations, threatening greater costs, worse publicity and higher fines in the case of serious violations. Such regulations have the potential to reinforce OHS requirements—and on some occasions to undercut them. Viewing OHS regulations as a resource invites the same perspective on these overlapping regulations. At times they, too, may constitute a resource for those concerned with OHS.

Environmental protection

Industrial emissions into the atmosphere have both environmental and OHS implications. Furthermore, the environmental concerns of residents living in adjacent areas are often a more powerful motivator to action than are the health concerns of workers in the plant. The workers may have limited capacity to mobilise politically, while nearby residents groups and environmental organisations may wield considerable political influence and have the ability to provoke far more costly intervention by the regulatory authorities. One company I interviewed was in just this position. It was spending many millions of dollars in an attempt to reduce its emissions, partly for OHS reasons but mainly in order to comply with Environmental Protection Agency licence requirements. Active community concern about emissions meant that the company's environmental manager had to attend local community meetings to explain what the company was doing. There was no similar pressure on the OHS manager. In his view, environmental concerns were more important than worker health concerns in driving this program of emissions reduction. In this matter, then, the OHS manager was something of a secondary player. But the implication for OHS specialists is that if they can identify an environmental dimension to an OHS problem they may well have a greater impact on management thinking.

Public safety: the case of the chemical industry

Public safety regulations imposed by city councils also have the potential to contribute to OHS. There are, for instance, regulations concerning the storage of flammable materials, and councils inspect relevant premises to ensure compliance. According to a number of

firms I interviewed these regulations and associated inspections have more impact than any OHS regulations and inspections.

Public safety regulations in the chemical industry are particularly important. Firms know that a disaster such as the Coode Island fire in Melbourne in 1991, in which toxic gases were released in large quantities into the atmosphere, may be followed by much tighter regulations and even rezoning, which may require them to cease certain kinds of operation or relocate their whole business. One firm I interviewed had recently made a decision to cease production of a particularly hazardous chemical, in part because of the proximity of a city hospital and fear of the consequences which would follow should a safety failure on the firm's part require the evacuation of the hospital. These kinds of concerns make the chemical industry particularly safety conscious. Indeed they drive the industry's Responsible Care program, an authentic case of industry self-regulation designed to improve the safety of the worst performers in the industry. This is seen by industry members as beneficial for the industry as a whole in forestalling the possibility of more onerous government intervention. This concern for public safety has obvious advantages for worker safety. OHS officers can gain considerable leverage by aligning themselves with city council inspectors and pointing out to management the wider public safety implications of various OHS hazards.

Public safety: an airline example

Some interesting examples of regulatory overlap were provided by the OHS manager of a large airline. He described how the safety of aircraft and passengers is a major concern of the company. The 'operations' (i.e. flight) safety department is large, well funded and highly effective, while the OHS unit is much smaller and less well funded. The reasons are obvious. A safety failure in flight could lead to a disaster with major implications for company profit; an accident involving only workers would not have consequences of the same magnitude. The result of this massive commitment to operations safety, from the point of view of the OHS manager, is that where he can show that an OHS issue has flight safety implications, he's 'laughing', as he put it. The health and safety of flight attendants piggybacks on general flight safety in this way. For example, certain problems suffered by flight attendants which were induced by cabin pressurisation led to the formation of a joint OHS/Operations safety committee which dealt with the matter in a

far higher-powered way than would have been the case had the issue been one of OHS alone.

The OHS manager also noted that the need to ensure that aircraft maintenance is done to the highest standards has had OHS payoffs for the maintenance workers. Maintenance procedures are almost clinical, he said. Engines which are removed for maintenance must be handled so gently that only the best gantries (lifting devices) will do. The result is an absence of manual-handling problems among these workers.

On the other hand, baggage handlers have had a relatively high incidence of manual-handling problems. These stem in part from the awkward way in which baggage has to be loaded into some aircraft holds, with handlers having to lie on their sides to stack baggage. But, he said, baggage handling machinery can not be put into these holds, nor can any modifications be made to the holds. 'You can't put a single pop rivet into a Boeing aircraft without losing your warranty', he said. These requirements, all in the interests of passenger and aircraft safety, operate to the detriment of worker safety. In this case the safety of baggage handlers depends on finding solutions which in no way impinge on the paramount concern for flight safety.

At present this airline's OHS unit is part of the personnel department. The OHS manager's dream is to have his unit transferred to the operations safety department. In this way, he believes, the company's approach to OHS issues might be brought into line with its approach to flight safety, with obvious advantages for workers.

Public health: the case of abattoirs

Abattoirs, particularly those with export licences, provide another example of regulatory overlap, this time with requirements which are imposed for the benefit of consumers—to ensure that the meat is fit for human consumption. The driving force behind these requirements is the need to maintain access to European and North American markets. The federal Department of Primary Industry polices the requirements, many of which are of direct benefit to workers. Most accidents in abattoirs involve workers cutting themselves with knives. Consumer protection requirements specify that no one may work with an open wound and that dressings must be waterproof. It is thus a virtual necessity for abattoirs to employ a nurse or first aid worker. Moreover, employees must be certified free from dermatitis and other

relevant diseases. In one abattoir I visited dermatitis is avoided by providing special creams to all workers. These requirements all function to the benefit of employees.

There is, however, another aspect of abattoir work where consumer health clashes with worker safety. A standard way to avoid knife injuries is for workers to wear a so-called 'mesh' glove on the hand which holds the carcase. The glove is rather like the chainmail gloves worn by knights in armour, flexible but proof against a sharp knife. But fat and blood tend to accumulate in the crevices of the mesh and health requirements are that the gloves be sterilised or replaced at frequent intervals. This slows production and reduces productivity. One possible way around this is for workers to wear a rubber glove over the mesh, which solves the health problem but reduces dexterity and feel. Some abattoirs are experimenting with other kinds of cut-resistant materials, but according to my informants no really satisfactory solution has been found. The result is that in some abattoirs people are working without any protection, in order to maintain productivity. Here, then, is a case where consumer health requirements appear to be in conflict with OHS needs. Unfortunately for workers, wherever such a conflict is perceived public health will be given priority since markets and hence company viability are at stake.

To sum up this section, the overlap between OHS and other regulatory requirements has advantages and some disadvantages for worker health and safety. Environmental regulations and public health and safety regulations, in particular, are often of greater significance to managers than OHS regulations are and, where these regulations are consistent with OHS requirements, workers benefit. Regulation in these other areas can thus be an important resource for OHS specialists. Where constructive overlap exists environmental and public health and safety regulations may provide a far more powerful way of attracting management attention than reliance on OHS regulations alone. On the other hand, where OHS appears inconsistent with these other regulations OHS specialists will need to find innovative solutions which enable both sets of objectives to be met simultaneously.

The role of the inspectors

The agencies whose job it is to enforce business regulations of any sort face an enduring dilemma: is compliance best achieved by

prosecuting and punishing regulatory violations when they are detected, or is the best policy to persuade violators by means of education, exhortation and warnings to bring their practices into compliance with the law. Pithily put, the dilemma is whether to punish or persuade (Braithwaite 1985). This question has dominated much of the regulatory debate.

Advocates of the conciliatory approach argue that the rigid prosecution of every 'petty' violation is counterproductive because it puts the employer on the defensive and destroys any possibility of cooperation or open communication about compliance problems which an employer might have (Rees 1988; Bardach and Kagan, 1982). They argue, furthermore, that the cost of prosecuting every violation which inspectors uncover would be prohibitive and that the policy of persuasion is the most effective use of scarce agency resources.

On the other hand, advocates of a prosecutorial approach argue that it is the only way to get employers to take their obligations seriously; any other strategy leads to endless prevarication (see Rees 1988, ch. 2). The conciliatory approach, it is said, involves an unjustifiable tendency to see things from the employers' point of view and leads to the 'capture' of regulatory agencies by those they are supposed to regulate.

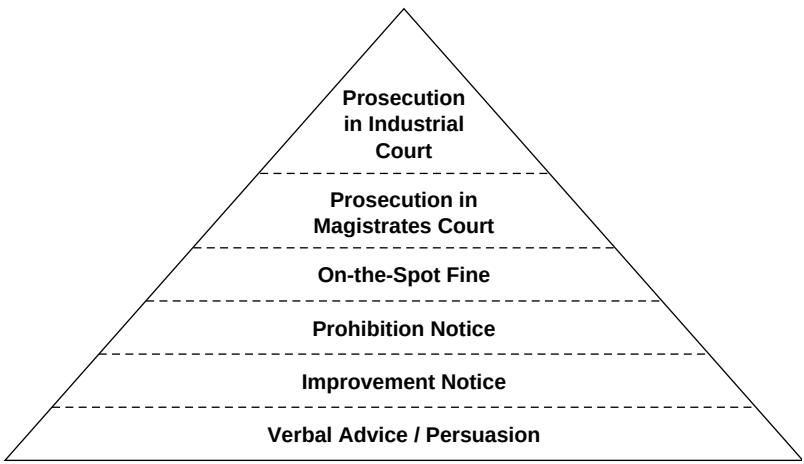
The consensus which has emerged from this debate is that the best policy involves the use of both punishment and persuasion, depending on the circumstances. The initial response should be one of persuasion, but as soon as employer resistance or prevarication is encountered the authorities must be willing to escalate their response. A graduated series of options must be available, and enforcement agencies must be prepared to prosecute vigorously in cases where employers are behaving culpably. This approach has been described as an enforcement pyramid (Braithwaite 1991), flexible regulatory enforcement (Rees 1988), responsive law (Nonet and Selznick 1978), and a graduated enforcement response (Carson and Johnstone 1990).

In the area of OHS there is considerable variation in the emphasis which regulatory agencies have placed on the punishment/persuasion options. In the United States the Occupational Safety and Health Administration has tended to adopt a punitive line, while in Britain a more conciliatory approach prevails (Vogel 1986). In Australia OHS agencies have traditionally been very much at the persuasion end of the spectrum (Braithwaite and Grabosky 1985). Moreover, in the pre-Robens era there were relatively few

enforcement options open to regulators other than prosecution for the regulatory violation. There was, in other words, no enforcement pyramid. In recent years, however, this situation has been remedied and in most jurisdictions a series of enforcement options is now available amounting to a very significant enforcement pyramid.

Below is the enforcement pyramid available in New South Wales (Allen 1991). At the base of the pyramid is verbal advice. This constitutes the great bulk of the work of the inspectorates, and most employers respond satisfactorily to such advice. Next up is an improvement notice, a formal notice identifying a particular hazard and requiring the employer to rectify it by a certain date. Failure to comply with the notice may result in a prosecution—either for failure to comply with the notice (maximum penalty $4000) or for failure to comply with the general duty of care (with much higher maximum penalties—or an on-the-spot fine. The notice will not specify just how the employer is to comply, but inspectors will discuss the options with the employer. Where there is an immediate danger an inspector may issue a prohibition notice, to remain in force until the hazard is abated. Failure to comply can lead to any of the options available in the case of an improvement notice. On-the-spot fines (more formally, infringement notices) involve a fixed $500 fine for a corporation and a fixed $50 fine for an individual. Note that the hierarchical ordering of these options is a little rubbery since a prohibition order could be very much more

Figure 6.1 OHS enforcement pyramid, NSW



costly to a company than an on-the-spot fine. Prosecution in a magistrates court, where the maximum penalty is $10 000, is the next step up, while the most serious cases can be prosecuted in the Industrial Court, where the maximum penalty for a corporation is $250 000 and for an individual $25 000.

Inspectorates in most Australian jurisdictions are making good use of these options. Take the NSW inspectorate, for example. In 1992–93 it carried out 75 000 workplace inspections, most of which would have involved advice to employers. In the course of these inspections 10 517 notices were issued. Of these, 71 per cent were improvement notices, 22 per cent prohibition notices and 7 per cent, or 825, on-the-spot fines. In the same period there were 310 prosecutions before the courts, the maximum fine before the Industrial Court being $60 000 (Workcover Annual Report 1993, pp. 15–16). A fine of $100 000 was imposed early in 1994. It is clear that the existence of an enforcement pyramid has given the inspectorate rather more clout than it previously had.

But although the enforcement role of the inspectorates has been strengthened in this way, there are other important aspects of their role which this analysis does not capture. Robens-style legislation places the responsibility for worker safety on the employer without specifying exactly what an employer should do to achieve this end. It is up to senior management to develop systems for managing safety, just as they manage other aspects of a company's operations. Inspectorates are therefore encouraging employers to systematise and structure their approach to managing safety, for instance by strengthening their health and safety committees, reviewing all accidents and near misses, doing systematic risk assessments and so on (Ochota 1992). As a part of this approach, inspectorates are now doing what they call 'safety audits' on large enterprises which may involve questionnaires, inspections and discussions with personnel at various levels in a company. These audits may evaluate the degree of compliance with specific regulations and may even result in enforcement action, for example notices, but their main purpose is to audit safety management systems and to encourage their improvement (see e.g. Queensland Division of Workplace Health and Safety, 1993).

This is not the place for a complete enumeration of the activities of inspectorates but one more should be mentioned, namely intensive programs designed to improve compliance and reduce injuries in particular industries. The industries are often (not always) chosen on the basis of their high workers compensation costs. In view of

earlier comments about the inadequacy of compensation statistics as indicators of the extent of injury, this is clearly a less than satisfactory system for targeting. Nevertheless, these projects have considerable potential to attract management attention to OHS. I shall illustrate their effectiveness shortly.

The impact of inspectorates

The preceding section sketched what it is that inspectorates do. The problem now is to evaluate the impact of this work. How effectively do they get management's attention, and with what result? There is a considerable body of systematic evidence on this question, mostly from the United States, which is well worth reviewing. A particular focus of the research has been on coal mine safety.

The impact of coal mine safety inspectors

The regulation of coal mines has been far more intensive than that of other sections of industry in the United States, and for that matter in Australia. In 1985 the US Mine Safety and Health Administration (MSHA) had roughly the same number of inspectors as the entire Occupational Safety and Health Administration (OSHA), and made twice as many inspections. MSHA covered about three thousand coal mines while OSHA covered about three million workplaces, making MSHA's inspections two thousand times more frequent (Boden 1985, p. 498).

The intensity of MSHA's program is due to the catastrophic nature of underground explosions, fires and the like which, though rare, may kill scores, even hundreds, when they occur. Each time such a catastrophe occurs there is a public clamour for tougher regulation. The resulting changes in the intensity of regulatory activity provide an opportunity to study its impact.

There have been three legislative initiatives in the United States since the Depression, each immediately following a major disaster: the 1941 *Mines Inspection Act* followed an explosion in West Virginia which killed 91 miners; the 1952 *Federal Coal Mine Act* followed an Illinois explosion which claimed 119 lives; and the 1969 *Coal Mine Safety and Health Act* followed the Farmington, West Virginia explosion in which 78 died (Braithwaite 1985, p. 78). Fatality rates declined sharply after the passage of the 1941 Act. They remained on a plateau after the passage of the 1952 Act but

again dropped sharply after the 1969 enactment. Lewis-Bech and Alford (1980) have shown that these changes can be explained almost entirely by the size of the federal government's budget allocation to coal mine health and safety regulation, most of which is spent on inspection. There was a sharp increase in the budget allocation following the 1941 enactment but not following the 1952 legislation, and a further dramatic rise in budgetary allocations after 1969. The conclusion which follows inescapably is that increasing the intensity of inspectorate activity decreases the fatality rate. (These findings are confirmed by Perry 1982; see also Wallace 1987.)

A second piece of evidence concerns the impact of the resident inspector program introduced by the MSHA in the mid-1970s but abandoned in the era of deregulation initiated by the Reagan presidency. Under this program inspectors were stationed full-time at mines with bad safety records. The fatality rates in these mines fell almost immediately to well below the national average. The impact of the inspectorate could hardly be more graphically demonstrated!

A further study analysed both fatality and disabling injury rates across all mines in the period 1973–75 and found that when other relevant factors were controlled both of these indicators were inversely related to the frequency of inspection. The study's author concluded that 'increasing inspections by 25 per cent would have produced a 13 per cent decline in fatal accidents and an 18 per cent decline in disabling accidents' (Boden 1985, p. 497).

It should be noted that none of these studies focuses on just what it is that inspectors do which has such an impact. Specifically, they do not raise directly the issue of whether to punish or persuade. What *can* be said, however, is that MSHA's inspection process has a very prominent punitive component. Under the 1969 legislation, whenever inspectors observe violations they are required to 'cite' them; that is, formally note them. Small administrative penalties are then imposed. Inspectors may also order the closure of the whole mine or sections of it. In Boden's study each mine had on average 106 violations cited per year, with total annual penalties of $8000 per mine. More significantly, during the period of the study inspectors closed all or a part of every mine on average four times a year! It is a good bet then that an increased frequency of inspections meant an increase in this type of enforcement activity. It is the increased frequency of inspection and associated enforcement, not just inspections, which Boden found to be associated with the drop in accident rates.

Finally, on the basis of a broad-ranging international inquiry into coal mine safety, citing the above studies among many others, Braithwaite concludes 'that the enforcement of mine safety laws has been a major factor in producing the dramatic improvements in coal mine safety of the past century, and that tougher enforcement in future can produce further improvement' (1985, p. 2). The evidence for the effectiveness of coal mine inspectorates is indeed persuasive. Can the same be said for OHS inspectorates more generally?

The impact of OSHA inspectors

The effectiveness of the US Occupational Safety and Health Administration since it began operations in 1971 has been the subject of a considerable body of research. The early conclusions were that OSHA had relatively little impact on injury rates. However recent path-breaking research undertaken by Scholz and Gray is now showing that OSHA has had a very substantial impact. The most likely explanation for this difference is that the earlier research was seriously flawed, methodologically, while the most recent work is far more sophisticated and overcomes most of the earlier research problems. This is not the place for a detailed account of these methodological issues or of the way in which the Scholz and Gray research is an improvement on previous work, but one particular improvement is easily grasped and worth mentioning. Whereas the earlier research looked for effects of inspections only in the year of inspection or in the following year, the most recent work looks for effects over a longer time period and in fact finds effects occurring up to three years after inspection. Thus one reason for the failure of some earlier studies to find inspection effects is that they were not allowing sufficient time for these effects to occur. Because the Scholz and Gray research supersedes all previous studies, we shall concentrate on it in what follows.

The Scholz and Gray work is based on a sample of 6842 large manufacturing plants with annual data on inspections, citations, penalties and injury experience for each plant from 1979 to 1985. Plants in the sample were inspected by OSHA on average 2.7 times over the seven-year period, but 23 per cent of plants were never inspected (Gray and Scholz 1993, p. 185). Violations were found in about 50 per cent of inspections. Serious violations were found in about 30 per cent of inspections, and about 30 per cent of inspections also resulted in the imposition of penalties.

In discussing the results we need to distinguish between the

general and specific effects of OSHA activity. The specific effects are those which are specific to the firms actually inspected, while the general effects are those appearing in all those eligible for inspection. Dealing first with the general effects, Scholz and Gray found that an increase in enforcement activity led to a general reduction in injury rates in all plants (not just those inspected). The effects, however, were modest: a 10 per cent increase in enforcement activity would have reduced injuries by about 1 per cent across all plants in the sample (Scholz and Gray 1990, p. 302).

As for specific effects, the finding was that plants that were inspected and penalised (that is, cited for violations and ordered to pay an administrative fine) experienced a 22 per cent decline in injuries over the following three years (Gray and Scholz 1993, p. 199). This is a very substantial decline, suggesting that OSHA is far more effective than previous studies had suggested.

In order to understand the significance of these specific effects we need to revisit the theoretical concerns of Chapter 2. The economic rationalist approach, which assumes that firms respond on the basis of rational economic cost calculations, does predict that there will be some, perhaps very slight, *general* preventive effects flowing from OSHA penalties. Rational firms will monitor the size of penalties being imposed by the regulatory agency and the probability of being inspected and penalised, and on this basis make some calculation of the financial risks involved in non-compliance versus the cost of compliance. In the jargon of the trade they calculate the expected utility of compliance. In theory, the fact of being inspected and penalised should not alter these calculations and therefore should not alter a firm's risk avoidance behaviour. Thus, on this basis, one would not expect any *specific* effects to flow from the activities of the inspectors.

The fact that there *are* very substantial specific effects suggests that firms are not acting in purely rational ways. What seems more likely is that the fact of being penalised has a certain shock value which serves to focus management attention on questions of health and safety which in turn leads to the real safety improvements which the research demonstrates. This interpretation helps make sense of several of Scholz and Gray's other findings.

First, the effects were independent of the size of the penalty. This is not surprising from the point of view of the management attention model. The average penalty per violation varied between $500 and $1500 over the period (Gray and Scholz 1993, p. 190). Given such small penalties, relative to company profits, variations

are not likely to register with management. But the fact of being penalised is itself a shock, independent of any financial considerations, and this is enough to gain management attention. There is an important qualification to this conclusion: it applies only for the range of penalties which Gray and Scholz observed. OSHA has imposed several multi-million dollar penalties in recent years, and the Gray and Scholz study says nothing about the effects of such very large penalties. They suggest that 'large fines of this size get media attention that more normal fines do not, and send strong signals about enforcement priorities' (Gray and Scholz 1991, p. 203). For this reason they may have effects not captured by their study.

Second, brief inspections which did not result in penalties had no injury-reducing effects (Gray and Scholz 1993, p. 192). Again this is not surprising. Where there is no penalty there is no shock and management's attention is not attracted. This is consistent with my own interview data. Senior management told me they were normally unaware of visits by OHS inspectors where such visits did not result in any formal notices. They were very much aware, however, when inspectors issued on-the-spot fines. I was told by the OHS manager of one very large company that on-the-spot fines gain management attention just as effectively as major prosecutions. This is in part a comment on the effectiveness of on-the-spot fines and in part a comment on the way in which top management in this company has been shielded from the impact of the prosecutions. This matter will be discussed at length in the next chapter. Prosecutions are of course very time consuming and tie up agency personnel for long periods. From this point of view, on-the-spot fines appear to be an efficient way of gaining management attention.

Third, returning to the US research, health inspections which were by their nature more intensive than safety inspections, and which resulted in fewer and smaller penalties than safety inspections, nevertheless had a greater impact on injury rates than did safety inspections. Gray and Scholz (1991, pp. 203–4) suggest that the explanation for this is that health issues are of greater complexity and that this may engage management attention to a greater degree than do safety matters. Furthermore, once its attention is engaged, management will concern itself with health and safety issues generally, not just health matters. Hence the reduction in injury rate. Note that this finding would be particularly difficult to explain using the purely rationalist model. Again there is an implication for Australian inspectorates. The most intensive inspections done here are the safety management system audits. The US findings suggest

that these are likely to result in significant safety improvements even if they do not result in any punitive action.

Finally, the fact that the injury reduction effects occur over a period of up to three years suggests that the response of management to penalties is not simply to correct the cited violation, which could presumably be done relatively quickly. It seems more likely that, once management's attention is drawn to the question of OHS by a citation and penalty for a specific violation, this 'triggers a broader review of performance that we suspect goes far beyond a legalistic response to OSHA standards' (Gray and Scholz 1993, p. 200).

These findings have some important implications for the 'punish or persuade' debate. The prevailing wisdom among compliance researchers in the United States is that enforcement agencies such as OSHA have been overly punitive and picky. This, it is suggested, antagonises the firms which are subjected to these petty penalties and destroys the possibility of cooperation between management and inspectors. This view is summed up in the title of a work by Bardach and Kagan, *Going by the Book: The Problem of Regulatory Unreasonableness* (1982). I have found such a view among company managers in Australia, too. In particular it was suggested to me that inspectors are imposing on-the-spot fines with little real justification. It was cynically hypothesised that they are involved in nothing more than a revenue-generating exercise. Listening to these complaints might well lead one to wonder whether on-the-spot fines are actually counterproductive, encouraging management to resist rather than to comply. The importance of the Scholz and Gray findings is that they demonstrate that, despite the feelings of resentment which such penalties may arouse, they do effectively focus management attention on questions of OHS and do result in lower injury rates. They are certainly not counterproductive.

To sum up this section, the Scholz and Gray data show that OSHA inspections are surprisingly effective in focussing management attention on OHS, with resulting reductions in injury rates. Moreover, they show that an important part of this effect is achieved by the punitive component of the inspections. This is not because the penalties are significant from a financial point of view. Rather it is because the mere fact of being penalised is something of a moral shock to company management and serves to focus attention on OHS in a way which inspections without penalty normally fail to do. The qualification 'normally' is necessary because inspections which are specifically designed to engage the attention of top

management (e.g. safety audits) probably have an injury-reducing effect regardless of whether penalties are imposed.

The effectiveness of industry targeting

Australian inspectorates are not only involved in inspecting or auditing particular enterprises. They also target high risk industries and develop industry-wide programs aimed at increasing compliance and reducing injuries. These programs tend to lie at the persuasion end of the punish/persuade spectrum. They invite management to cooperate in seeking solutions to the industry's OHS problems.

One recently published evaluation of such a program demonstrates just how effective they can be (Young and Campbell 1989). The program focussed on health and safety in the cotton industry in northern New South Wales. It was triggered by the high level of notifiable accidents among the workers in cotton gins—the factories which transform freshly harvested cotton into bales of lint cotton. The program began in 1987 and ran for two years. Inspectors sought the cooperation of employers and workers and did an initial safety audit of all gins, giving advice and in some cases issuing orders. They drew up an action plan with employers which included dust control measures, machine guarding, safer work systems and improved training. Following the initial audit they visited each gin once a month. As a result the major employer began spending about a million dollars a year on safety measures and employed a full-time safety officer. The program was an outstanding success, reducing the annual number of accidents by 80 per cent and the accident rate by nearly 90 per cent. It should be noted that these figures refer to notifiable accidents (essentially serious accidents) and not workers compensation claims. Thus improvements cannot be due simply to better claims management practices of the type discussed in Chapter 3. The study shows, in other words, that intensive industry-specific campaigns by OHS inspectorates can be dramatically effective.

Conclusion

In this chapter it has been argued that regulation represents a significant resource, not only for inspectorates but also for health and safety personnel of all sorts working within large organisations.

Not only does OHS regulation function in this way, but so also do overlapping environmental and public health and safety laws. OHS regulations are a very effective tool for drawing management's attention to questions of OHS, for where a firm is not in compliance and management is on notice about this situation both the firm and its senior managers are liable to prosecution in the event of any serious injury occurring.

It has been shown, too, that inspectorates are far more effective in ensuring workers' safety than is often realised. In order to be effective they must have a range of progressively more punitive options available to them and must be willing to seek penalties wherever appropriate. This is not because the penalties can be expected to *compel* firms to comply, although the threat of very large penalties may indeed have that effect. It is because imposing penalties provides something of a shock, which turns out to be an effective way of drawing management attention to health and safety. Once attention is focussed in this way, improvements in OHS performance can be expected. It is important to understand the process in this light because there are ways of gaining management attention other than by imposing penalties. Intensive safety audits and intensive industry-wide campaigns seem to have this effect even in the absence of penalties. Wherever inspectorates are able to deploy their resources in this very intensive manner, the use of punitive sanctions may be unnecessary; where such intensive intervention is not possible it appears that penalties *are* necessary if management attention is to be effectively engaged.

7

Prosecuting for workplace death and injury

Prosecuting companies which kill or injure their workers is only one of a number of strategies available to governments seeking to improve workplace health and safety. It involves a reaction, after the event, in contrast to more pro-active regulatory strategies which seek to prevent harm before it occurs. Pro-active or preventive policies are of course preferable—they represent the regulatory system at work, safeguarding employees. Reactive prosecutions, on the other hand, are really a symptom of the breakdown of regulation—they occur only when pro-active procedures have failed to ensure worker safety. Reactive prosecutions are often bitterly resented by employers on the grounds that the harm was truly an accident for which they cannot reasonably be blamed. This chapter shows, first, that employers *are* culpable when they are prosecuted; that is, that the injuries concerned are not simply the result of unavoidable and regrettable accidents for which employers cannot be blamed. Second, it shows that such prosecutions can have preventive effects; that is, that they do have an important part to play in the total system of preventive regulation. (For further discussion of the reactive approach see Hopkins 1993a; Hutter and Lloyd-Bostock 1990.)

The offences

What are the offences for which employers are being prosecuted? Until the early 1980s and the advent of Robens-style legislation in

Australia (to be discussed further below), reactive prosecutions were for whatever violations of the preventive regulations inspectors uncovered in the course of investigating a workplace injury or death. Thus a prosecution might have been for failure to have the guard on some dangerous machine in place, failure to supply workers with a ladder which conformed to prescribed standards or failure to install scaffolding as prescribed in legislation. These offences typically specified maximum penalties of only a few hundred dollars. Furthermore, they were 'strict liability' offences; that is, there was no requirement that the employer be shown to be culpable in the sense of having known about the violation or having negligently allowed it to occur. It was enough that the machine was unguarded or that the ladder was not as prescribed in a regulation for a conviction to be possible. In these circumstances employers might well argue on occasion that the violations were technical only and not really criminal offences.

However, the 1980s saw the passage in all Australian states and territories of Robens-style legislation, which moved away from highly prescriptive regulation and imposed a general duty of care on employers. The great majority of prosecutions are now for breach of this general duty. Let us use the New South Wales case to exemplify the new legislation. Section 15 of the *Occupational Health and Safety Act* 1983 (NSW) requires that 'every employer shall ensure the health, safety and welfare at work of all . . . employees'. Note that where the employer is an organisation, as is normally the case, this duty falls on the employing organisation rather than on any individual. Put simply, the word 'employer' normally refers to a company.

Although this duty of care appears, from the company's point of view, to be frighteningly absolute, it is modified by the defences available under section 53. This section states that an employer is not guilty of an offence if it was not 'reasonably practicable' to comply. Thus, for a company to be found guilty, the court must be satisfied that it was reasonably practicable for the company to have ensured a worker's safety and that, despite this, it failed to do so. Similar provisions apply in other jurisdictions. One can begin to see, then, that for a prosecution to succeed some degree of company culpability is involved. Let us spell this out a little further.

The phrase 'reasonably practicable', as used in the legislation, can be taken as meaning approximately what it means in common law proceedings for damages. At common law a precaution is reasonably practicable and ought to have been taken if, first, the

harm was foreseeable by a reasonable person; second, the harm was practicably preventable (for instance by using appropriate procedures or protective equipment); and, third, a reasonable employer would have taken the necessary precautions (Brooks 1993, ch. 2). Thus a conviction implies that the employer failed to foresee what a reasonable employer would have foreseen (or worse still actually foresaw) and failed to take preventive action which a reasonable employer would have taken. Spelt out in this way, it can be seen that an employing company will be found guilty under this legislation only if it has exhibited considerable negligence with respect to employee safety. In short, a prosecution will succeed only in circumstances where the employer is indeed blameworthy. Some examples will clarify the point.

In one case a skip (a large and very heavy metal bucket) was being used regularly to tip raw materials into a furnace. A man was employed to clean the debris which fell from the skip in this operation. In order to avoid being hit by the skip he had to duck when it passed over him and on at least one previous occasion it had grazed him on the head and shoulders. On a later occasion an employee had failed to duck and had been decapitated. Management commented at the coroner's inquiry that it did not know of the existence of this dangerous situation. But the death was reasonably foreseeable (there had already been at least one near miss) and certainly practicably preventable (the company took the necessary precautions subsequently). The company was convicted under the general duty of care provision and fined some $6000, the magistrate saying that it was one of the most serious breaches he had dealt with, being both tragic and unnecessary (NSW, *WorkCover News* no. 8, p. 21).

A second example: a man was injured when he fell onto an unguarded section of transmission machinery. The court was told that the safety guard for the machinery had been left off because it did not fit properly and adjustments to the machinery could not be made while it was in place. The guard had not been in place for four months prior to the accident. Here again the injury was both reasonably foreseeable and preventable; the company in other words was guilty of serious negligence. It was fined $25 000 (NSW, *WorkCover News* no. 13, p. 21).

A final example: an injury occurred because a company had directed its employees to continue working despite the fact that an inspector had found the work so dangerous that he had issued a

notice prohibiting further work (Victoria, *Recent Prosecutions* 2/93). The culpability here is self-evident.

Magistrates frequently comment on the carelessness or negligence of the defendant companies. Here are some magistrates' comments taken from various issues of the Victorian publication *Recent Prosecutions* (emphasis added): 'The defendant was *grossly negligent* and had shown a *flagrant disregard* for the health and safety of its employees' (4/92); 'it is difficult to imagine a more *blatant breach*' (4/91); 'far too much was taken for granted by the defendant and the accident was easily preventable' (3/91); 'it is difficult to see how anyone could fail to recognise the inherent danger of the work practice adopted' (3/91); 'the modifications to an existing guard were *recklessly undertaken*' (1/91); 'arrangements for employee welfare were really *grossly inadequate*' (1/91).

These statements leave little doubt that in the minds of magistrates the injuries befalling workers are not simply unfortunate accidents but are the result of truly culpable behaviour on the part of the defendant companies. They are not mere technical violations but serious offences, sufficiently blameworthy to warrant condemnation and punishment by the State.

Finally, it should be noted that many of the companies being prosecuted are not simply fly-by-nighters. Many are major Australian firms with good reputations.

The prosecutions referred to above are all of corporations—that is, of organisations. Much of the legislation passed in Australia in the 1980s also makes it possible in certain circumstances to prosecute individual directors and managers for offences committed by the corporation. In most cases it is up to the prosecution to show that the individual was directly responsible for the offence or consented to it or was wilfully negligent in the matter. Again, therefore, it is clear that an individual manager or director cannot be prosecuted unless there is some degree of negligence on his or her part. These are certainly not strict liability offences. There have been relatively few prosecutions of individuals under these provisions and those few that have occurred have involved the managers or directors of relatively small firms. But the possibility of such prosecutions is of considerable significance, as I shall argue later.

Why prosecute?

Having discussed the kinds of prosecutions being mounted we can now address the question, why prosecute? Two kinds of justification

can be given: the first in terms of justice, and the second in terms of the preventive effects of prosecutions. The argument in terms of justice is this: if companies and their managers and directors behave culpably they *deserve* to be punished. Questions of equity or fairness are also at stake. Where individuals injure or kill each other in more conventional ways they are prosecuted. Not to do so when a company kills or injures its workers in a culpable fashion involves a kind of moral blindness and a bias in favour of the rich and powerful.

The second justification, in terms of the preventive effects of prosecutions, immediately faces us with an empirical question: do these prosecutions in fact have an effect on the companies and individuals concerned and on others who may come to know of the prosecutions? I do not propose to try to answer this question in a generalised way. Any such attempt faces severe methodological problems which I shall not canvas here. I take a rather different tack. Let us assume that prosecutions can have preventive effects in some circumstances. The question of interest then is: what are these circumstances?

In trying to answer this question we need to recall the distinction between specific and general effects. Specific effects are those on the companies and individuals actually prosecuted, and general effects are on others who are aware of the prosecutions and who may thus be motivated to comply with the law in order to avoid prosecution themselves.

Specific preventive effects

Consider first the specific effects on organisations prosecuted. A number of the companies in which I carried out interviews happened to have been prosecuted in the recent past and thus provided me with an opportunity to explore this question. I shall describe four cases which exhibit some of the possible variation in specific effects. Some general lessons will then be drawn from these cases.

Case 1

The company operates Australia-wide and employs thousands of workers. It has a number of semi-autonomous business divisions. The prosecution, the first ever against this organisation, was initiated when a worker received a severe but non-fatal electric shock. The

general manager of the division concerned was known for his lack of commitment to safety and had not provided the resources necessary for proper training and for the purchase of safe electrical equipment, even though lower level managers had pressed for them. Not even an earlier fatality in his division had caused him to give a higher priority to safety. Nor, it should be noted, had corporate headquarters forced the issue. The decision by the regulatory authority to embark on a prosecution changed all this. The general manager was removed, and the division now operates quite differently. Moreover, the effect was not just on this division. The chief executive officer was worried about the effect the prosecution might have on the corporation's public image, and the corporation began an intensive process of documenting its work procedures in order to ensure that best practice was observed.

Prior to the prosecution the company's health and safety manager had toured the country talking to managers about their responsibilities under OHS legislation. Senior managers had not come to his briefings, sending delegates in their place. But when the prosecution was launched the question of the responsibilities and liabilities of top managers became an item for discussion at meetings of the corporation's senior management. News of the prosecution spread far more rapidly and widely through the corporation than did news of the original incident.

Case 2

The company is involved in offshore petroleum production. Some maintenance work was not done in accordance with standard safe procedures, resulting in an oil leakage. A fire ensued and burned out of control for several minutes, injuring one worker. Others were overcome by smoke. The fire could not be controlled because one fire-hose nozzle was blocked and the fire-hose pumps did not function properly. A preliminary inquiry took nearly two and a half years to come to a conclusion, followed just over a year later by a prosecution. The company was convicted of failure to maintain a safe workplace, its first such conviction, and fined $6000.

The effect of the incident and the associated legal proceedings was dramatic. The company had believed that it had good safety management systems, indeed it had prided itself on them, but it was forced to accept that they were not good enough. The failure of its safety systems caused a severe dent in the corporate ego. Since the fire the company has improved its safety auditing, revised its

physical procedures in relation to locks, danger tags and the like, and most importantly made its platform supervisors not just 'responsible' for safety but 'accountable'. What this means is that safety is now one of the performance criteria by which they are assessed for remuneration purposes and indeed for continued employment. Supervisors know that, if some among them are to be laid off in any company reorganisation, those with a poor safety record are likely to be among the first to go.

The incident has also contributed to the company's determination to work harder at creating a culture of safety; that is, an environment in which even the lowest level supervisors are totally committed to safety and will not tolerate any departures from safe practice.

It is often difficult to disentangle the effects of a prosecution as such from other effects of an accident such as the blow to corporate pride and the loss of production. These consequences in and of themselves may generate major safety improvements, quite independently of prosecution. In this case, it would seem that the far-reaching safety improvements which the company undertook were a response to the accident itself and not to the prosecution which occurred some three and a half years after the fire.

On the other hand, the threat of prosecution hung over the company throughout much of this period. Soon after the fire the minister announced that no decision about prosecution would be made until after the initial inquiry report was handed down, thus putting the company on notice that a prosecution was a distinct possibility. It would be unrealistic to argue that this threat of prosecution had no impact at all.

There is one more consequence of the legal proceedings following the fire which deserves to be highlighted. The company chose to be represented in court by one of its most senior managers. He reports that being quizzed on how and why the fire occurred was one of the most significant events of his life, profoundly reinforcing his commitment to safety. This man was one of the driving forces behind subsequent safety improvements.

Case 3

This is a large manufacturing company with thousands of employees. It has been prosecuted a number of times, but the financial penalties imposed, normally only a few thousand dollars, are insignificant in relation to company profits. The company's health and

safety manager is not involved in the prosecutions, which are handled by the firm's legal department. The company normally pleads guilty, which avoids the need to give evidence or to have any company personnel appear in court. Sometimes, in arguing for as small a penalty as possible, the company lawyer will put an employee on the witness stand to give evidence of what has been done since the death or injury to prevent a recurrence. But these witnesses are never members of senior management. They are local area safety officers, front line supervisors or middle level managers. The company regards prosecutions as relatively routine matters—they are not 'pivotal events', I was told—and the prosecutions themselves do not call forth a company-wide response. Furthermore, the company does not see itself as a recidivist or repeat offender. The events occasioning prosecution occur in different parts or divisions of the organisation and are viewed as unconnected with each other, and the number of prosecutions tends to be explained in terms of the size of the company rather than any exceptional level of negligence. It should be said, too, that the company is not unresponsive to fatalities; recent safety initiatives at senior management level are in part an outcome of concern that the number of fatalities has been too high. The point is simply that prosecutions do not in themselves appear to have much of an impact. No doubt one reason for this is that, although senior management keeps itself informed about the prosecutions, it is never involved in them and never has to experience directly the indignity and stigma of a court appearance or to confront the gruesome reality of the deaths and injuries which occasion the prosecutions.

This case has important implications. Were the authorities to find ways of getting senior managers into court as witnesses, or possibly even as individual defendants, one could expect these prosecutions to have greater effect. To be specific, if company lawyers can call witnesses on the question of penalty it would seem reasonable for the prosecution to subpoena senior managers and grill them on what steps they had taken to prevent a recurrence. If such an examination revealed an inadequate response from corporate headquarters, senior management would find itself acutely embarrassed and motivated to take a more direct interest in organisational reform.

Case 4

The general manager of a major metropolitan hospital was one level below his present position at the time the hospital was prosecuted.

He learnt about the prosecution through a newspaper report and heard nothing about it at work. In his current position he is unaware of any impact of the prosecution on the hospital. It is clear that communication within the organisation about this matter has been non-existent. The general manager is also unconcerned about personal liability, viewing such a prosecution as a remote and most unlikely event.

This case raises an important point. Unless organisations have some way of formally noticing prosecutions and reacting to them in an organisation-wide way, prosecutions are unlikely to have a significant impact in terms of changing the management systems which led to the violations in the first place. The hospital exhibited serious organisational incompetence, indeed paralysis, in apparently doing nothing about the negligence which led to the violation in question. There is a good argument in cases such as this for courts to impose on managements a requirement to respond in a coherent and organisation-wide way, and perhaps to file with the OHS authorities a statement of the organisational changes which they have made to prevent a recurrence anywhere within the organisation. Court orders requiring defendant companies to undertake some form of organisational rehabilitation of this kind have been recommended in the specialist literature and have been used overseas (Fisse 1990, p. 597, n. 53). They are likely to enhance the specific preventive effects of prosecution in cases such as this.

Conclusions about specific preventive effects

The diversity of response in the above cases reinforces the earlier comment about the difficulty of drawing any general conclusions about the specific preventive effects of prosecution; that is, the effects on the companies prosecuted. We can, however, draw some conclusions about strategies which are likely to enhance these effects.

First, it seems likely that repeat prosecutions of a company do not have the same impact as first-time prosecutions. First-time prosecutions are a shock. They are threatening because they involve the unknown. In particular, the consequences in terms of bad publicity for the defendant company are unknown and, for that reason, feared. Once the process is known, companies may form the view that they have relatively little to fear and may come to regard prosecution as just one more cost of doing business. In these

circumstances prosecutors must try to 'up the ante' in one of the ways described below.

Second, the level of fines is not sufficient to have a significant deterrent effect on large companies. Only if courts are prepared to impose fines much higher than they currently do will these fines in themselves become an influential consideration. One way of encouraging courts to impose higher penalties on repeat offenders would be for the prosecution to present evidence of the magnitude of company profits in order to demonstrate to the court the relative insignificance of the penalties previously imposed.

Third, top managers are often very concerned about possible adverse publicity flowing from prosecutions. Regulatory agencies should take every opportunity to publicise the names of offending companies and to describe the culpability involved so that no one can harbour the illusion that violations are simply technical breaches or that injuries and deaths are unavoidable accidents.

Fourth, prosecutions can be regarded as having a significant impact if the organisations respond by making fundamental changes in the way safety is managed. These changes should be company-wide and not confined to the particular circumstances of the offence. Thus, for example, replacing a guard on an unguarded machine is not enough. At the very least the company should audit all its machines regularly to ensure that all guards are properly installed. If at the time of the prosecution the company cannot report that such changes have been made, or are in the process of being made, the court should impose some form of organisational probation or rehabilitation order on the company to achieve this end.

Fifth, prosecutions of companies are likely to have a greater impact if the prosecutors can find ways of getting senior managers into court. The unpleasantness of this experience is likely to focus the minds of senior managers on the problem and provide a real and very personal incentive to avoid repeat occurrences. In particular, senior managers should be asked to describe what company-wide changes have been made to prevent a recurrence. They will be severely embarrassed if they have to admit that the company has failed to make any such changes.

General preventive effects

What are the effects of prosecution on *other* companies, not themselves the target of prosecution? Many small employers are largely

unaware of the existence of regulations and have certainly never heard of the general duty to maintain a safe and healthy workplace. They may be quite ignorant of prosecutions launched by the regulatory authorities. Firms large enough to have specialised managerial positions are, however, generally aware of the existence of health and safety regulations. Most managements of larger firms I spoke with were only dimly aware of prosecutions but this awareness was sufficient to create the belief that violations may have legal consequences and that it was therefore expedient to comply with the regulations. This belief is evidence of the general preventive effect of prosecutions.

Consider the previously noted case of the Queensland Electricity Commission which is building the Stanwell Power Station. When the project began in 1988 the Commission was aware of the imminent passage of the *Workplace Health and Safety Act 1989*, which would place responsibility for safety at construction sites primarily on the principal contractor, in this case the Commission. A certain number of fatalities was considered the norm on large power station construction projects, but the Commission recognised that from now on it would be held accountable for these fatalities. It therefore set itself the objective of no fatalities on the new site and introduced an energetic safety program to achieve this goal. Worksafe Australia is so impressed by the program that it has declared the project one of its 'best practice' sites. It is clear from Worksafe's analysis that the Commission's commitment is driven in part by a belief that there would be legal consequences in the event of non-compliance.

Larger organisations generally have specialist health and safety officers who are often specifically charged by management with the job of ensuring that the the company is in compliance with relevant legislation. In several cases I studied, the position of health and safety officer had been created in response to new legislation which either required companies to designate such officers or established new obligations which employers felt they could be certain of complying with only by employing an OHS specialist. It was the fear of the legal consequences of non-compliance, that is of prosecution, which motivated these changes. As one manager put it to me, the OHS officer was appointed so as 'to reduce the company's exposure' (to legal liability). Was fear of prosecution a factor in this, I asked. 'There's no question about it', he said. When I asked another manager what, if anything, motivated him to think about health and safety matters he said, without hesitation, 'Fear' (of

prosecution). This is precisely what is meant by the general preventive effect of prosecution.

Personal liability

Managers often do not distinguish clearly between prosecutions of corporate entities and prosecutions of individual managers and directors. Insofar as they do it is the fear of personal liability which is by far the most important motivating factor. It is ironic that, although there have been very few prosecutions of company directors or managers in Australia for health and safety offences, it is this kind of prosecution which most exercises their minds. It is quite widely known that individual directors have been prosecuted and even sent to gaol in the United States, and this has had a profound effect on the thinking of some managements and boards.

Concern about personal liability for OHS offences is driven in part by the provisions in various environmental protection Acts which make directors and others personally liable for environmental offences. This legislation normally specifies defences available to directors and managers; that is, arguments which they can advance to exonerate themselves. The most reliable of these defences is that they used 'all due diligence' to prevent the contravention by the corporation. Directors and top managers have become very aware of the personal liability provisions in environmental legislation in recent years, particularly as they involve the possibility of being sent to gaol, something which is not provided for in OHS legislation. In the chemical and petroleum industries the concern about personal liability is particularly acute because of the potential for environmental disasters in these industries, for example oil tanker spills, which generate enormous public outrage and demands for retribution. For many companies the OHS manager is also responsible for compliance with environmental legislation and this close connection between the two has served to enhance directors' fears of personal liability under OHS law as well.

The extent of personal liability under OHS legislation is generally less than that under environmental law. The use of 'due diligence' is specified as a defence in two states and would certainly protect senior company officers from liability in all other states. But, more than this, in most states ignorance of the contravention is a defence, provided that the ignorance is not negligent or wilful. In New South Wales the Act states that a senior officer is not liable if 'the

corporation contravened the provision without his knowledge'. Only in Queensland is it mandatory for a senior officer to show due diligence in order to avoid liability.

The response of senior company officers who are concerned to avoid personal liability is to set in place management systems which promote workplace health and safety and to audit these systems to ensure that they are working as well as possible. Directors and managers who have set up such systems can be reasonably sure that they have exercised 'due diligence' and that they could not be held personally liable in the event that a worker was killed or injured or, worse, that some disaster resulted in more widespread death and injury.

One chemical company has what it calls a 'regulatory affairs manager'. His job, quite explicitly, is to ensure that the company is in compliance with all relevant legislation. He divides his areas of responsibility into three risk categories: high risk, including OHS and environmental matters; medium risk, including trade practice and consumer affairs matters; and low risk, including company law matters. Risk is assessed in terms of financial costs and the likelihood of legal and other impacts on the company, as well as the risk of personal liability. It is the last of these—personal liability—about which directors express most concern and which, I was told, motivates the compliance program more than anything else. The regulatory affairs manager needs to be able to report to every meeting of the board that, for each area of concern, 'we are substantially in compliance'.

According to the manager of health, safety and the environment in another large company, the personal liability of directors is by far the most effective pressure on the company to take worker health and safety seriously. Since environmental regulations were enacted making directors personally responsible, the board has asked the managing director at every meeting about compliance. The board normally requires more information about environmental than OHS compliance, but increasingly it is asking about the latter. However, spending on environmental matters is still more readily approved than spending on OHS.

The health, safety and environment manager described to me how, despite a policy which forbade employees riding on the bonnet of certain of its vehicles, an employee was killed doing just that. There was considerable evidence that, despite the policy, the practice of free-riding was in fact widespread. Following the death, he said, 'everybody was going back looking for documentary

evidence that they had cautioned people about free-riding', so as to be able to demonstrate that they had exercised due diligence. 'Due diligence is the way to go', he said. 'This is the way to get to managers.'

Some OHS management consultants are making very good use of personal liability to interest their clients in matters of health and safety and, incidentally, to convince them of the advisability of buying the services of a consultant to set up 'due diligence' systems.

The approach of one management consulting firm I spoke with is first to talk to the board of directors of a potential client. Here the consultants stress the personal liability of directors. If they win a contract they then conduct management seminars throughout the company; and in a typical one-day seminar half the program will be devoted to ways in which managers can exercise due diligence. The consultant firm supplies its clients with advice on how to manage health and safety, and stresses other benefits such as reduced workers compensation costs. But there is no doubt, after talking with managers in one of the client companies, that the clearest message which remains in their minds is the need to show due diligence in order to avoid personal liability.

It is important to make a distinction between, on the one hand, line managers and directors of very small companies, who can be expected to have some first hand knowledge of the circumstances of a violation, and, on the other, senior managers and directors of large companies who would normally know nothing of such details. The way the law is currently written makes it very difficult for a prosecution to succeed against a director or senior manager of a large corporation. In New South Wales in particular, where ignorance is a defence, directors of large companies are virtually immune from prosecution. This substantially reduces the legal, if not the psychological, significance of personal liability. Australian OHS legislation needs to be rewritten so that directors cannot plead ignorance; due diligence should be their only defence.

By contrast, it is much more difficult for 'hands on' or line managers to plead ignorance of the circumstances of an offence, and it is for this reason that the individual prosecutions which have occurred have been of these smaller fry. Notwithstanding this limitation, these prosecutions have proved useful for some company health and safety officers who inform their own line managers about them as a way of reinforcing the personal liability message which they are seeking to convey.

Despite the difficulties presented by the current legal situation, it would be good tactics for the regulatory agencies to place a high priority on finding cases where directors of reasonably large companies can be prosecuted. The evidence presented here suggests that any such prosecution would send shudders through every boardroom in Australia. Even in the absence of such cases regulatory agencies could well take a leaf out of the book of the management consultants and publicise the theoretical possibility of such prosecutions more than they do.

The interaction of corporate and personal liability

One of the less recognised preventive effects of prosecuting companies is that it raises the salience of personal liability in the minds of company officers and other relevant audiences. Consider the following case.

Four city council workers were clearing weeds from a river using a three-person boat. They were not equipped with lifejackets and one man could not swim. The boat foundered due to overloading and the non-swimmer drowned. The council was prosecuted and fined $7000. As a direct effect of the prosecution the council adopted a new health and safety policy with an associated training program, resulting, among other things, in a substantial decrease in the number of injuries. This is an example of the specific preventive effects of prosecution.

There was also a general preventive effect. Although there was no suggestion in this case that any council engineer should be personally prosecuted, the case generated a widespread awareness of the theoretical possibility of such a prosecution. Professional engineering magazines carried articles about the personal liability of senior engineers under the OHS Act, and one engineer in a neighbouring council went so far as to transfer all his assets into his wife's name. The prosecution raised the spectre of individual prosecutions and this, I was told, is what really made people jump.

The precedent-setting function of prosecutions

Prosecutions can also serve to make employers take action in areas in which previously they had thought they had no responsibility.

Take the case of fatigue, a major cause of industrial death and injury. The state rail authority in Western Australia, Westrail, was successfully prosecuted following a road accident in 1990 in which one of its employees was killed. The man had been working for 34 hours without adequate sleep and went to sleep at the wheel of his truck. Prior to the fatality Westrail had taken no responsibility for the amount of overtime worked by its employees. As a result of the prosecution it now limits their hours of work.

Again, the NSW Forestry Commission, which is responsible for the safety of contract workers cutting timber in its forests, was prosecuted when a contract worker who had been working twelve hours a day, seven days a week, injured himself. The prosecution failed, but the judge commented on the likelihood that men who are paid by the amount they cut will suffer from fatigue. The situation, he said, predisposed 'a tired man to accepting risk that he otherwise might not have accepted, to get the job done' (OH Newsletter 287). The Commission had not previously seen it as part of its responsibility to control the number of hours worked by contract workers, but following the prosecution it has taken on this responsibility so as to reduce the risk of accidents caused by fatigue.

Such a prosecution would be of particular benefit in the long distance road haulage industry. According to a recent study, more than a quarter of all work-related fatalities in New South Wales involve trucks. In many of these a major factor is fatigue, caused by driving long hours without sleep. Where these drivers are working for employers, or have hours of work effectively determined by freight forwarders, there is a good case for holding the employers or freight forwarders liable. This has not been done to date, and these fatalities go largely unscrutinised by the OHS authorities. A few precedent-setting cases in this area would encourage the industry to provide safer systems of work for the drivers. Improved safety in this one area could be expected to lead to a significant reduction in the number of all work-related deaths. There can be very few circumstances in which prosecution has the potential to have such a dramatic life-saving effect (Hopkins 1992).

A note on common law compensation

It may seem strange to include a note on common law compensation in a chapter on prosecution. The reason will become apparent in a moment. Workers compensation legislation is essentially no-fault

legislation; that is, workers are entitled to compensation regardless of whether the employer was at fault. In addition to such legislatively based compensation payments, workers are entitled in some circumstances to sue their employers for damages under common law (the judge-made case law built up over centuries). For such an action to be successful it must be shown that the employer was negligent—that the injury was reasonably foreseeable and preventable. It is apparent, therefore, that a common law action for damages is similar to a prosecution for 'failure to maintain a safe work place so far as is reasonably practicable' in terms of the degree of culpability involved and the type of evidence necessary to establish liability. However, the awards for damages in such cases have often been considerably higher than the highest comparable fines. For example, in 1992 a court awarded damages of $240 000 against the Sydney City Council (OH Newsletter 281).

Although the damages are actually paid by the insurer they have a substantial impact on the employer's premium and so function very much like fines, as far as employers are concerned. They therefore have the potential to produce both specific and general preventive effects in much the way that criminal penalties do.

Common law cases probably have the greatest general preventive effect when they set precedents. Take the 1992 passive smoking case in which an employee was awarded $85 000 (OH Newsletter 274). The case received widespread publicity and employers are now on notice that they need to implement anti-smoking policies or face costly common law actions. This has contributed significantly to the move towards smoke-free workplaces.

Manslaughter

Recent years have seen persistent suggestions that companies be prosecuted for manslaughter when they kill their workers in culpable fashion (Neale, cited in Wettenhall 1988; Polk et al. 1993). The suggestions are not just that individual directors and managers be prosecuted but that in appropriate circumstances corporate entities be charged. It is in fact the policy of the authorities in Victoria to do so and at the time of writing they have just recorded their first corporate manslaughter conviction, against a very small company. It should be noted, too, that some of the magistrates' comments cited earlier—'gross negligence', 'reckless'—connote levels of blameworthiness sufficient in law to warrant manslaughter convictions.

That magistrates are using these words suggests that in their minds manslaughter charges might well be appropriate.

The reasons for proceeding down this path are twofold. First, there is the equity argument: if individuals who cause death in a culpable fashion in more conventional circumstances can be charged with manslaughter, or even murder, why not companies?

Second, the purposes of prevention are well served: a corporate manslaughter conviction carries with it rather more stigma than is associated with a conviction for failure to maintain a safe workplace. This stigma, or the fear of it, can be expected to have a potent preventive effect, particularly if the proceedings are run as showcase trials with maximum publicity. Research has shown that bad publicity has a powerful preventive effect on large corporations (Fisse and Braithwaite 1983). But corporate misconduct does not automatically generate bad publicity. When large-scale financial scandals are uncovered, or when disasters involving widespread death or environmental destruction occur, publicity is assured; but when one or two workers are killed in a particular workplace there is seldom nationwide publicity, and the impact on the image of a large corporation is minimal. In these circumstances a showcase manslaughter trial could be expected to generate the level of publicity and consequent corporate embarrassment necessary to have a significant preventive effect.

To give an example: when three people died in the United States as a result of design defects in the Ford Pinto, hardly anyone noticed. But when Ford was prosecuted for homicide, the whole world watched (Cullen et al. 1984).

As far as penalties are concerned corporations cannot be imprisoned, but they can be fined and courts would presumably be willing to impose rather higher fines in such cases than they currently do. Thus manslaughter convictions could have a greater deterrent effect from this point of view as well. There is also the earlier mentioned possibility of court-ordered organisational reforms.

The preceding comments assume that the target of the prosecution is a corporation. Of course manslaughter charges can also be laid against named corporate officers. But the purposes of prevention will probably be served better if manslaughter prosecutions are aimed at corporations rather than individuals, since a focus on individuals is likely to lead to the prosecution of relatively small fry, given that their culpability is most easily established. This has been the experience in the United States where homicide prosecutions

have been successful against a number of small company directors who managed company activities in a very hands-on way (Reiner and Chatten-Brown 1989).

The law in Australia concerning manslaughter on the part of corporations is currently in an unsatisfactory state. In order to gain a manslaughter conviction the prosecution must normally establish a high degree of negligence. But negligence is a state of mind, and since a corporation does not have a state of mind it is problematic to describe its behaviour as negligent. One way in which Anglo-Australian law gets around this is by attributing the state of mind of top personnel to the company (Fisse 1990, pp. 599ff.). Thus if a senior manager is negligent the company will be held to be negligent. In this way a corporate offence turns upon individual negligence. This approach works with small companies where top managers play a hands-on role and where it may well be the personal negligence of a manager which is responsible for a death. But for large companies the approach is sociologically unrealistic. In a large organisation it is often not the negligence of one individual which is critical but the negligence of a number of individuals, or indeed the failure of the organisation as a whole to develop safety policies and to mandate procedures which would have prevented the fatality.

Consider the case of the P&O cross-Channel ferry, *The Herald of Free Enterprise*, whose bow doors were left open as it departed from Zeebrugge, causing it to fill with water and capsize, drowning nearly 200 people. Here is what an inquiry judge said.

> At first sight the faults which led to this disaster were the aforesaid errors of omission on the part of the Master, the Chief Officer and the assistant bosun (who should have closed the doors but was asleep at the time), and also the failure of Captain Kirby to issue and enforce clear orders. But a full investigation into the circumstances of the disaster leads inexorably to the conclusion that the underlying or cardinal faults lay higher up in the company. The Board of Directors did not appreciate their responsibility for the safe management of their ships. They did not apply their minds to the question: what orders should be given for the safety of our ships? The directors did not have any proper comprehension of what their duties were. There appears to have been a lack of thought about the way in which the 'Herald' ought to have been organised for the Dover/Zeebrugge run. All concerned in management, from the members of the Board of Directors down to the junior superintendents, were guilty of fault in that all must be regarded as sharing responsibility for the failure of management. From top to bottom the body corporate was infected with the disease

> of sloppiness . . . The failure on the part of the shore management to give proper and clear directions was a contributory cause of the disaster . . . (Wells 1993, pp. 46–7)

This is a case where the negligence was truly corporate and it is difficult to pin the blame on any one individual at whatever level in the hierarchy. Indeed, an attempted prosecution of the company for manslaughter, based on the recklessness of individual senior managers, failed because the judge did not concede that these managers had been reckless with respect to the closure of the door since they were in no way involved in this particular matter (Wells 1993, p. 69).

The failure of the prosecution in the Zeebrugge case illustrates how the conventional criminal law, preoccupied as it is with individual guilt, is presently unable to comprehend truly corporate fault. Legal commentators have been urging for some time that this defect be remedied by enacting notions of corporate negligence into law (Field and Jorg 1991; Fisse 1990; Wells 1993). Until this is done charges of manslaughter against large companies are unlikely to succeed. Health and safety authorities should take the lead in encouraging governments to enact the concept of organisational blameworthiness into the criminal law. This would provide a useful addition to the range of options open to prosecutors.

Conclusion

Prosecution is just one of many strategies available to the regulatory authorities. Some commentators have urged that it be the strategy of last resort, to be used only when offenders exhibit particular recalcitrance (Ayres and Braithwaite 1992). In many circumstances this is good policy. An advisory approach will sometimes secure compliance more effectively than a punitive approach (Bardach and Kagan 1982) and prosecution is, in any case, a time-consuming and expensive strategy which can only be used sparingly. There are, however, circumstances in which prosecution is appropriate as a first resort, in particular when workers are killed or injured as a result of company negligence. In addition to reasons of justice and equity, the purposes of prevention are well served by such prosecutions. Death and injury are prima facie evidence of management failure, and holding companies responsible may motivate them to do better. But prosecutions do not always have this effect on the companies prosecuted; the challenge for the authorities is to find

ways to maximise the impact. A number of ways were suggested in the preceding discussion, including issuing subpoenas to the defendant company's top managers to appear in court, so that they can be brought face to face with their responsibilities, and requiring companies to engage in corporation-wide rehabilitation—that is, organisational change designed to make a recurrence less likely. Prosecution also sends a signal to other companies about the importance of compliance in a way that more conciliatory approaches can never do.

More effective than any of this, however, is the threat of personal prosecution. It is this, above all else, that managers and directors fear and which motivates them to comply with the law. The irony is that, as the law presently stands, the prosecution of the directors of large corporations is extremely difficult. Law reform on this point should be given the highest priority. Queensland has already shown the way by making due diligence the only defence against personal liability. A few show trials of the directors of large companies for failure to concern themselves with the health and safety of their workers would be extremely salutary.

Prosecution also serves to establish precedents, compelling employers to safeguard the health and safety of their workers in ways which were previously thought to be beyond their realm of responsibility.

Finally, the current criminal law makes the prosecution of large corporations for manslaughter almost impossible. The law needs to be changed to permit such prosecutions. This last recommendation is not intended to detract in any way from the emphasis on personal liability recommended above. The fact is that it is the fear of personal liability which most exercises the minds of managers. Moreover, law reform facilitating the prosecution of individual managers and directors would be easier than law reform in relation to organisational fault. Nevertheless, there are circumstances where a prosecution for corporate manslaughter might well be the most appropriate course of action, were such a legal option available.

8

Workers and their unions

In this chapter we look at the impact of workers and their unions in drawing the attention of management to occupational health and safety and, perhaps more to the point, in gaining management action. We make a distinction between workers and their unions in recognition of the fact that workers do not always act through their unions. Nevertheless, as we shall see, it is largely through the union movement that workers have their impact.

At the outset it must be recognised that the impact of labour is not independent of the other factors already discussed—economic incentives and regulation. In fact there is an essential interdependence. Strikes over safety matters threaten company profits and so provide an economic incentive for employers to pay attention to OHS. This is a fundamental but obvious point. The interaction between labour and the regulatory system is more complex, and needs to be considered in greater detail at this stage.

The interaction between labour and the regulatory system

Labour is involved in regulation and its enforcement in a variety of ways, from the level of government down to the workplace. At the level of government the involvement is via the machinery of tripartism—the philosophy which holds that State agencies should be run by boards consisting of representatives of business, labour and government. These boards are responsible for standard setting and

the development of regulations. At the level of the workplace, worker representatives can use these regulations in a variety of ways to enhance workplace health and safety. Thus the regulatory system stems in part from the political power wielded by workers at the level of government, and in turn serves to empower workers on the job.

The key to understanding this situation is the workers' health movement. Until the early 1970s OHS was not on the labour movement agenda in Australia in any significant way (Pearse and Refshauge 1987, p. 638). The union approach to job hazards generally was to demand danger money; that is, compensation for job hazards rather than their elimination. But the early 1970s was a period of social change. Women's health centres were established, stimulated by the women's movement and the community health movement and funded by the Whitlam Labor government. These centres soon recognised that occupational health was one of the major concerns of their clients. In 1975 the Liverpool Women's Health Centre formed an industrial health group which began publicising the problem of RSI, particularly among migrant women. The unions became involved and in 1977 a Workers Health Centre was established at Lidcombe in Sydney, funded by progressive unions. Similar centres were established in other cities.

> There was also a growing number of scandals involving workers' health; for example, asbestos, the Alpha Chemical company [in which workers were exposed to mercury, arsenic and other dangerous chemicals and a number ended up with mercury poisoning which results in permanent brain damage—Bartlett 1984, p. 42], carcinogenic coke oven emissions at the Australian Iron and Steel Port Kembla plant, and the growing recognition and incidence of musculo-skeletal injuries, particularly those associated with process and assembly work . . . Many trade unions were also beginning to realise that they needed to increase their activity in the area, and in 1979 the AMWU was the first trade union to appoint OHS officers. In 1979 the Annual Congress of the ACTU adopted its first Occupational Health and Safety Policy [in 1980 the Trade Union Training Authority began its OHS courses—Bartlett 1984, p. 43] and in 1981 the ACTU established an OHS Unit in conjunction with the Victorian Trades Hall Council. This unit has become a major source of technical and policy advice to trade unions (Pearse and Refshauge 1987, p. 640).

This buildup of pressure from unions, workers' health centres and other elements of the labour movement is in part responsible for the round of legislative reform which occurred in the 1980s. The fact that most of Australia's OHS authorities are tripartite in some

sense is the specific legacy of the union-influenced Labor governments which prevailed at both state and federal level during the 1980s.

The importance of the labour movement in promoting the regulation of OHS is not confined to Australia. A tripartite approach to policy making has been a feature of many European societies. As in Australia, it is a consequence of the electoral success of governments associated with organised labour. It has been conspicuously absent from the scene in the United States (Noble 1986, p. 224). But although organised labour has not been formally incorporated into the machinery of government in America, it has nevertheless had a major impact on the development and enforcement of regulations. The strength of US coal mine safety legislation and the vigour with which it is enforced, described in Chapter 6, owes much to the efforts of the United Mine Workers of America (Wallace 1987). Moreover, according to Rees (1988, p. 28), the vigorous enforcement policy adopted by the US Occupational Safety and Health Administration in the 1970s was a result of the influence which industrial unions wielded at the time. Finally, the growth of concern among unions and other groups in the 1980s about hazardous chemicals in the United States—toxics populism—led to a 'right to know' movement which resulted in the enshrining in legislation of workers' rights to know about the substances to which they are being exposed (Robinson 1991, ch. 7).

To summarise, the impact of labour is not independent of the impact of regulation; one of the ways in which labour has its impact is via the enactment of regulations. In the next section we examine in more detail how these regulations in turn empower workers on the job.

Worker/management committees and worker representatives

There are two basic mechanisms by which legislation has sought to give voice to workers: by requiring employers to form joint worker/management committees, and by facilitating the election of worker OHS representatives whom management is obliged to recognise and who have various rights prescribed by law.

Joint worker/management committees

Legislation in nearly all Australian jurisdictions and in Britain either requires or makes provision for joint worker/management committees. The central point to note about these committees is that they are not intended to function as decision-making bodies or even as places where workers and management can negotiate differences, but simply as consultative bodies and channels of communication. They may raise issues, make recommendations and transmit information, but they have no formal power under legislation. The result is that, in and of themselves, they are incapable of *forcing* management to attend to matters of OHS.

There are two circumstances in which such committees do appear to have some impact. The first is where management is already committed to OHS for other reasons. In these circumstances committees work tolerably well. But they exert no independent influence. Hence in the absence of management commitment they are useless. Analyses of safety committees in several jurisdictions have come to this conclusion. First, Brooks has judged the system in New South Wales to be 'largely valueless' in this respect (1987, p. 230). This is a particularly important judgement in the case of New South Wales since that state relies exclusively on these committees to give workers a voice and makes no provision for workers' health and safety representatives with legislatively prescribed powers. Second, a study of the system of self-regulation in Britain also concludes that committees are relatively ineffective as a means of gaining management attention. It argues that the most important precondition for these committees to function successfully is a pre-existing commitment on the part of management (Dawson et al. 1988). Third, a study in the United States, where OSHA for a while experimented with handing over some of its responsibilities to joint worker/management committees in what was called the Cooperative Compliance Program, found that the success of the program depended on a strong company commitment to safety (Rees 1988, p. 238). In particular, committees were effective only if the company had a strong safety department, willing and able to resource safety committees and to implement or at least champion their recommendations with senior management (1988, p. 134). Again, therefore, these committees exerted no independent leverage on management. None of this should be taken as an argument for abandoning such committees. Where there is management commitment to improving OHS performance, committees have an important

part to play. The point is simply that they play no independent role in generating management concern.

The second circumstance in which OHS committees have some impact is when they are backed by strong union organisation. Under these conditions consultation can at times become more akin to bargaining, with implicit or explicit threats of industrial action if management does not take the necessary action. This was Dawson's finding in relation to safety committees in Britain. In my own work it was notable that the most effective joint committee I encountered was on a building site with a strong union presence (see Chapter 9).

One episode I came across in my fieldwork illustrates these points in a more indirect way. A very large manufacturing company had a continuing problem with silica dust being extracted from smokestack emissions prior to discharge into the atmosphere. Silica dust causes silicosis, a respiratory disease with a long latency period. Workers had to remove filter bags of dust periodically, and the hygiene procedures were not adequate to prevent them from being contaminated. The company had made some changes to cope with the problem but had not monitored them to ensure their effectiveness. Workers tried to raise the matter through their safety committee, but with no senior management people on it the committee did not know how to deal with the matter and was afraid of the response of higher management if it 'made waves'. A union health and safety officer, a full-time union official, happened to be on the site one day when a worker was refusing to do the job on the grounds that he had a medical condition. The official organised an inspection by representatives of management, the local supervisor, the chair of the local safety committee and union officials. He identified the problem, recommended a solution and monitored the situation to see that the recommendation was carried out. In this case, then, the initial failure of the safety committee to draw on union resources rendered it ineffective. It was only when the union became involved, almost by accident, that the safety committee's concerns were taken more seriously and something was done. At no stage was there an explicit threat of industrial action, but the involvement of the union's professional safety officer ensured that the matter could not simply be ignored any longer.

Worker health and safety representatives

Worker health and safety representatives are the linchpin of the union approach to OHS (Mathews 1993, p. 513). While unions

support joint OHS committees, they regard them as an addition to and not a substitute for the appointment of worker OHS representatives with recognised rights and powers. In Britain and in most Australian jurisdictions (the notable exception being New South Wales), legislation now makes provision for the election of OHS representatives and requires employers to recognise them, to give them time off on full pay to attend training courses, and to allow them time on the job to carry out their functions. In addition, the legislation in most cases gives these representatives the right, where there is an immediate danger, to order a temporary cessation of work, pending a government inspection. It also provides representatives with the right to issue provisional improvement notices which employers may simply comply with, or dispute by calling in a government inspector.

The legal basis of the powers which health and safety representatives wield makes them inherently more effective than health and safety committees which have no legal powers. As Brooks observes, 'safety representatives can make a contribution to health and safety even in the face of hostility or lack of commitment on the part of managements: safety committees cannot' (1987, p. 228). Another factor which enhances their impact is that they have the right to training which gives them access to information and other resources and makes them far more effective in confronting management, pointing out their legal obligations and suggesting courses of action.

The power to stop work, even temporarily, and the power to issue provisional improvement notices was particularly controversial when first enacted; employers feared that these powers would be abused. Research now shows, however, that provisional improvement notices have been used sparingly and that, in the majority of cases, when they are disputed by employers they are upheld by government inspectors. Moreover, the possibility that a provisional notice might be written is enough in many cases to get employers to take action at the request of a health and safety representative without the need for a notice to be formally issued (Powning 1992, pp. 15–16).

There is some tentative evidence that the appointment of health and safety representatives is having an impact on actual injury rates. South Australian Workcover data show that the number of claims per 100 workers has tended to rise in workplaces without such representatives but to remain stable in workplaces where a representative has been elected (Powning 1992, p. 17). While these

results must be treated with caution for several reasons, not the least of which being that they involve claims data and are hence subject to claims management processes, they at least suggest that health and safety representatives are making a difference.

There are some important findings from the United States relevant to the question of the effectiveness of health and safety representatives in Australia. In their study of the impact of the US Occupational Safety and Health Administration, Scholz and Gray (1994) found that where workers complained to OSHA about some safety problem, and OSHA responded by inspecting the plant, injury rates declined. Furthermore, this decline was independent of the penalty, being just as marked when no penalty was imposed at all. This stands in contrast to inspections initiated by OSHA itself, where the data show that a penalty of some sort is necessary to gain management attention (see Chapter 5). Where workers call in OSHA inspectors the OSHA response appears to empower workers to pursue health and safety matters themselves. As Scholz and Gray put it, 'workers within the plant, once encouraged by OSHA's response to the complaint, maintain their focus on safety issues and are increasingly effective in influencing plant safety issues . . . The OSHA response legitimates their concern and provides management with an incentive to co-opt workers into safety decision processes to minimize future complaints' (1994, p. 21). The implications for Australia are clear. Where a health and safety representative issues a provisional improvement notice which is upheld by an inspector, this will empower workers to take a greater interest in OHS than they did previously, thus reducing injury rates.

A further finding from the Scholz and Gray study is also relevant here. Complaints were more likely to come from plants which were unionised than from those which were not. Union backing appeared to make it easier for workers to lodge complaints. Extrapolating to Australia, a strong union is likely to contribute significantly to the impact of health and safety representatives, just as it does for health and safety committees. It may well be, for instance, that despite provisions in the legislation prohibiting employers from discriminating against worker health and safety representatives, it is only when backed up by a union that they will feel able to resist employer intimidation and be prepared to issue provisional improvement notices. Here, then, is a justification for the union movement's insistence that health and safety representatives should be union representatives; that is, appointed according to union procedures (Mathews 1993, pp. 513–4).

Bargaining for safety

Perhaps the most direct way in which unions can have an impact on safety is by bargaining. Different types of bargaining can be identified with different potential impacts on safety. Four types will be mentioned here. They are, from the workers' point of view:

1) give us money and we'll accept the lack of safety
2) do something about this unsafe situation or we'll take industrial action
3) give us a health and safety agreement and we'll give you industrial harmony
4) give us money and we'll give you safety

The first of these is the old danger money approach. Unions bargained with management for height money, heat allowance and other forms of additional compensation where workers were running exceptional risks (Mathews 1993, p. 12). The union movement has long since abandoned this approach to health and safety.

Second: eliminate this hazard or we'll take industrial action. This is a form of bargaining which occurs in specific workplaces and which is particularly important in relation to health hazards. For example, strikes at BHP in 1980 were an attempt to get management to take effective action with respect to carcinogenic coke oven emissions. While this action did not bring the major capital investment necessary to eliminate the hazard, it did quicken the pace of reform (Fisse and Braithwaite 1983, p. 87).

Third, the negotiation of health and safety framework agreements is now a major part of the strategy of the union movement (Mathews 1993, pp. 13–17, 499–512). These agreements aim to empower workers with respect to OHS matters in various ways. Their central feature is the appointment of union health and safety representatives with various rights recognised by the company. Companies are required to allow these representatives to carry out their functions during work time and to give them time off on full pay to undergo OHS training. Moreover, the agreements often require the establishment of joint worker/management OHS committees with certain rights and duties.

The importance of these agreements is that they challenge the traditional managerial prerogative in relation to OHS matters and provide workers with a legitimate role in taking OHS initiatives. In terms of the Robens philosophy they are a step towards self-regulation. Legislation in most states now supports various features of these agreements, as we have already seen.

A critical aspect of the agreements is the provision for OHS training. One consequence of this training is that union safety representatives quickly become more expert in OHS matters, and particularly in the legal requirements, than their immediate bosses are. In one company I visited I was told how this led line managers to feel at a disadvantage when dealing with safety representatives and thus to make requests to higher management that they, too, be given OHS training. This was duly agreed to. The whole process served to raise the profile and legitimacy of OHS issues in an unprecedented way.

The fourth approach is based on a very different premise. Whereas the previous approaches all assume that safety is something which is largely under managerial control, the fourth approach assumes that safety is something which workers can deliver. It provides workers with incentives, usually in the form of safety bonuses, to reduce the number of injuries which they suffer. It is based on the old 'blame the victim' notion that injuries are a result of worker carelessness or apathy, and assumes that providing workers with incentives will make them more careful and less apathetic. In principle, it is a denial of management responsibility for workplace safety. The unions are strongly opposed to these safety bonus schemes, the main reason being that they encourage workers not to report injuries. Thus a worker who suffers a back injury may work on, doing further damage from which he or she may never fully recover. Furthermore, injury reports are often a warning to management of the existence of a hazard and can function as a trigger to corrective action. If such reports are repressed, hazards may not be rectified and other workers may suffer injury. In short, safety bonuses are actually a safety hazard.

Such schemes are often the result of a management initiative and do not involve any bargaining between management and workers. However, some of the currently fashionable enterprise agreements also include clauses to this effect. One Victorian company, as part of an enterprise agreement, has linked pay to a number of performance indicators which include LTI statistics and numbers of doctors' treatments (*Australian Safety News*, June 1993, p. 32). While such agreements may cut a company's workers compensation costs, they are unlikely to result in any real OHS improvements and may even disguise a deterioration in OHS performance. There are good reasons, therefore, to exclude them from enterprise bargaining. Occupational health and safety framework agreements (Type 3 above) could, however, be incorporated into enterprise agreements

with benefit and have been recommended by the ACTU (George 1993).

Health issues

We have already noted that the compensation system does not give rise to significant pressures on employers to concern themselves with illnesses with long onset times. The regulatory authorities have also on occasion failed to take effective action in relation to occupational health issues. For instance, during the 1970s workers at the Alpha chemical company were routinely exposed to levels of mercury well above the allowable limits. Government inspectors knew of problems at Alpha and visited the premises some 50 times in the space of seven years! Throughout this period the inspectorates were aware of the dangerous levels of mercury to which workers were exposed, having done tests which revealed mercury in their urine. But throughout this time they took no legal action, indeed no effective action at all. It was not until pressure from the Workers' Health Centre at Lidcombe and the unions brought the matter to public attention that things changed (Workers Health Centre 1979, pp. 10–11).

The inability of the compensation system to provide incentives in relation to health issues and the patchy record of the regulatory authorities mean that union action is often the only way in which companies can be forced to take action on some health hazards. The Hoechst dispute in Melbourne in 1990 provides a good example both of the impact of union action and of the issues which characterise these disputes. (This account relies on Berger 1993.)

In June 1990 workers at the Hoechst Altona plant voiced concern about the chemical DCB, which they were required to handle. They had become aware of reports in the international literature that DCB was a suspected human carcinogen and a known animal carcinogen. Hoechst in Germany was treating DCB as a carcinogen but Hoechst in Melbourne was not. Workers discovered that two years earlier the company occupational hygienist had written a report on the problem which had not been made available to them. This both angered and frightened them. Soon afterwards they obtained a copy of the report which noted that 'as of September 1988 the plant has had two employees diagnosed as having bladder tumours'. The report also found that work areas were contaminated with DCB. This frightened workers even more. Union health and safety officers

were called in and confirmed the problem. In August a union shop steward was sacked, for allegedly helping a TV journalist to gain access to the plant. This triggered a 13-week strike by 74 maintenance workers. The Health Department then withdrew Hoeschst's warrant to use DCB. In mid-September Hoechst admitted breaching the law in relation to the handling of DCB. There followed further rallies and strikes on a larger scale. In mid-December an independent review confirmed workers' fears about the extent of DCB contamination. The whole matter was a public relations disaster for Hoechst. Berger, a union health and safety officer, notes that as he continued to conduct workplace inspections around Victoria he found that companies were keen to avoid such public relations disasters in their own cases, and were more receptive than previously to requests for OHS improvements. Thus not only did the events force changes at Hoechst but there were also flow-on effects to other companies.

One feature of this story which is common in such cases is the suppression of information. In the coke oven scandal a government report written in 1980 concluded that emission levels were in excess of various standards and that employees were 'at considerable risk' (Fisse and Braithwaite 1983, p. 80). The company was given a copy of the report; five months later when unions enquired what had happened to it they were told that a copy had been given to the company but not the union. It took a four-day strike before workers gained access to the report. Reports on the results of inspections and tests at the Alpha chemical plant were similarly denied to workers and only extracted after parliamentary questioning. This common feature underlines the importance of 'right to know' legislation, such as the requirement that employers make available to workers material safety data sheets for substances they handle. The availability of such information is a vital prerequisite for effective union action in relation to such hazards.

A second generalisable feature of the Hoechst events is the role of fear, both on the part of workers and on the part of employers. The health hazards under discussion are possibly fatal, and workers rightly fear for their lives. This is a powerful motivator to collective action. Employers are also fearful, about the bad publicity which these issues can generate. Where headlines scream about cancer deaths and company callousness, employers fear that this will provoke or intensify strike action, government intervention and shareholder nervousness. When mobilised, these fears are a potent force for safety.

A note on the industrial relations of uncertainty

The long-term health impact of hazardous substances is often uncertain. There may be evidence, for instance, that high concentrations of a substance cause cancer in animals, but there may be no available evidence on the effect on humans. Moreover, where exposure limits have been established, staying within these limits is no guarantee of safety. The allowable concentrations of atmospheric contaminants are often simply statements of exposure levels below which no ill effects have yet been observed. These limits tend to be lowered as more evidence comes to light. For instance, during the 1970s the exposure limit for vinyl chloride in the United States went from 500 parts per million to 200ppm and then 50ppm. It then went to 'no detectable level' and ended up at 1ppm. In Australia, the eight hour exposure limit stands at 5ppm (Mathews 1993, p. 341). It is quite possible that current exposure standards for a variety of hazards will be found to be unacceptably high when better epidemiological studies are done. In these circumstances of uncertainty occupational health issues are inherently industrial relations issues. Managements will naturally seek to play down the risks and point out, if they can, that they are in compliance with whatever the current standards may be, and workers will understandably be concerned for their safety. The best outcomes will be achieved, however, if the available information is provided to all parties, uncertainties are acknowledged, employees' fears treated as legitimate, and resolutions negotiated in a bona fide way, without any attempt by management to convince workers that their fears are ungrounded.

In practice, uncertainty can breed confusion, mistrust and less than satisfactory outcomes for all concerned. An example from my fieldwork, concerning formaldehyde, will make the point. Formaldehyde was in use in the health industry as a disinfectant until the 1970s when, because of its adverse health effects, it was replaced by a less dangerous substance, glutaraldehyde. Formaldehyde is, however, still in use in Australia for certain purposes. It can cause skin and eye irritation and can result in asthma in a small number of individuals. Moreover, according to Worksafe Australia, it is a 'probable human carcinogen' (Exposure Standards for Atmospheric Contaminants in the Occupational Environment, p. 92). Worksafe's safety notes on formaldehyde further state that it 'is known to be carcinogenic in rats, causing tumors of the nasal cavity. Evidence for carcinogenic effects in humans is limited, and the majority of

studies have been inconclusive. Since the substance is a possible human carcinogen, it is desirable to keep exposure levels as low as possible'.

In a chemical factory I visited, workers from time to time had to pour a bucket of formaldehyde into a vat. A fan was positioned to draw the fumes into the vat and another to provide an airstream past the vat so that workers could stand upstream from the vat as they poured. Nevertheless, some workers experienced skin and eye irritations. They knew, too, about much more stringent precautions taken in another factory producing formaldehyde. They were fearful of the long-term consequences of their exposure, but they had no documentary material available to them to support their concern. Their solution was to request management to install an extractor fan in the roof of the building. Management's reply was that the safety procedures in place were adequate, that the workers concerned should wear the personal protective equipment provided for them if they were suffering ill effects, that an extractor fan in the roof would not reduce and might actually increase their exposure and that the safety data sheet which the company had on formaldehyde did not indicate that it was a potential carcinogen. Management's view was that the workers were simply using the situation as a means to secure better ventilation to combat summer heat. I was told that management would probably accede to the demand for the extractor fan in the roof in return for some concession on the workers' part next time they were involved in bargaining with the union.

Here, then, is a case of bargaining going wrong. The information available to management was incomplete and no written information was available to the workers. Their proposed solution was really no solution. The possibility of re-engineering the process so that the workers were not exposed to the substance at all did not appear to have been seriously considered. Only if workers are equipped with additional knowledge about the strategies by which such hazards can be controlled can their bargaining power be directed more effectively to resolving such problems. The case illustrates the importance of information in empowering workers to deal with their own health problems in an industrial relations context. It also illustrates the need for governments to ensure that the safety data sheets on which workers and management rely are complete.

Conclusion

In this chapter we have seen that workers and their unions can play an important role in gaining management action on OHS. They can do this by direct industrial action which impacts financially on the employer or they can do it in interaction with the regulatory system. We have seen that the workers' health movement is in part responsible for the improvements which have occurred in the regulatory system, and in turn that regulations serve to empower workers in various ways. They do so by giving them a voice on the shop floor—by requiring employers to recognise, resource and respect worker health and safety representatives and to a lesser extent by requiring employers to set up joint worker/management OHS committees. Regulations also empower workers by giving them the right to know about hazardous substances in the workplace so that they can act accordingly. We have seen, too, that these rights are most effectively exercised when workers are backed by union strength. In non-unionised sectors of the workforce there is little chance of workers effectively drawing management attention to OHS, no matter what legal rights they may have. Numerous overseas studies have come to very similar conclusions (Noble 1986; Dawson et al. 1988; Kelman 1981; Robinson 1991).

In the area of disease, as opposed to traumatic injury, organised labour is particularly important and effective in attracting management attention. It is particularly important because neither compensation costs nor broader productivity considerations have any impact. Furthermore, the regulatory agencies themselves cannot always be relied on to do the job effectively. In many cases it is only collective action by the workers themselves which will stimulate management to action. Such action is likely to be particularly effective because the fear which health hazards can generate promotes the solidarity necessary for sustained collective action, and because the publicity which such action can attract where carcinogenic substances are involved is particularly embarrassing and unwelcome for employers.

9

The irrelevance of compensation costs: the case of the construction industry

The construction industry is one in which workers compensation costs exert no pressure whatsoever in the direction of safety. This chapter seeks to examine in some detail why this is so. In the process, it will seek to identify the forces for safety which *are* operating in the industry. A close look at this one industry is useful in that it fleshes out some of the more abstract ideas developed in previous chapters.

The approach is by way of a case study. In a sense the chapter takes a vertical slice through the industry: it looks at one large construction firm (to be known here as Big Buildings Ltd), one of its construction sites (Project Skyscraper), one subcontractor on that site, and the experience of one employee. Some of the broader propositions which emerge from this examination are by their nature applicable to large sections of the industry, and those familiar with the industry will recognise that in addition many of the details generalise readily. Nevertheless, it must be acknowledged that a single case study will not be representative of the industry in every respect.

It is important to make one specific qualification. The chapter looks at a firm which operates at the national level and constructs large buildings. Small-scale construction, in particular house construction, is a very different sector of the industry, to which the case study presented here has only limited relevance. Most obviously, comments to be made about the importance of unions in ensuring safety in the present case do not apply in the housing construction sector which is largely not unionised.

The key to understanding the irrelevance of compensation in the large building construction sector is the system of contracting. The client—that is, the firm or organisation for which the building is to be constructed—invites tenders for the job and on this basis chooses some major construction company as the principal contractor. The latter agrees to do the job for a certain price and by a certain date. Failure to complete by this date may lead to substantial financial penalties. The principal contractor engages subcontracting firms to carry out different aspects of the project—excavating foundations, erecting steel, erecting formwork, pouring concrete and so on. These subcontractors in turn engage hired labour. On a large site one subcontractor may have well in excess of 50 workers at the height of the firm's activity. The principal contractor, on the other hand, may have as few as 10 or 15 direct employees on some sites, among them a crane driver and a dogman responsible for loading the crane. Thus the great majority of workers on a large construction site are usually employees of the subcontracting firms, not of the principal contractor.

This system of work leads to a major disjunction between safety and compensation. At law, employers are responsible for compensation and must carry workers compensation insurance. Thus the subcontracting firms carry the main costs of workers compensation. However, the principal contractor exercises close control over the subcontractors and even over their employees. In these circumstances the law imposes the primary responsibility for the safety of these workers on the principal contractor. (Subcontractors are responsible at law only to the extent that they exercise real control over the work process.) The result of these arrangements is that compensation costs cannot provide safety incentives so far as project management is concerned. Insofar as the principal contractor is safety conscious this must be for reasons other than the costs of compensation. By way of qualification, it should be noted that some industry leaders are now employing a greater proportion of the workers on site directly. Where this happens the disjunction will be correspondingly blurred.

The situation described above is not unique to the building industry. We have already encountered another example of this in connection with tree felling in state forests (see Chapter 4). Wherever the system of contract work leads to this bifurcation of responsibilities the potential for compensation pressures to influence safety is minimised.

Big Buildings' approach to compensation

The focus so far has been on the broad picture. There are complexities yet to be dealt with which can best be addressed in the context of Big Buildings Ltd.

Big Buildings is a national firm with numerous construction jobs in hand at any one time. Thus, although it employs only perhaps ten workers directly on any one site, this adds up to many hundreds around the country. One might wonder, therefore, whether compensation costs could after all exert some safety pressure on it.

In each state an insurance company/authority charges a compensation premium to Big Buildings' state office. It is based on the claims experience of the company, statewide. This premium is passed on to the individual project managers, not on the basis of the claims experience of the particular building site—this would be impracticable for a number of reasons—but simply on the basis of the number of workers on the company's payroll at that site. Thus, since the compensation payment which the project manager is required to make is independent of the actual claims experience at his site, *in principle* it cannot act as a safety incentive at the construction site level. (This problem was discussed more thoroughly in Chapter 3 and will not be pursued here.) This accounting practice reinforces the earlier noted inability of compensation costs to function as safety incentives for project managers.

Nevertheless, from the point of view of head office, workers compensation is costing the company millions of dollars annually, and there are clearly savings to be made. The corporate response to this financial cost is not to seek ways of improving safety, but rather to engage in other claims reduction strategies.

One of these is more effective claims management. The national health and safety manager recounts how, when he first took on his job, he discovered more than a dozen people who had been off on workers' compensation for more than three months and were clearly costing the company dearly. He went to visit each one at home and managed to get them all back to work on alternative duties.

Another claims reduction strategy has been to introduce pre-employment medicals. The concern was that some claims were for the exacerbation of injuries suffered in previous employment. The easiest way to avoid such claims is to deny employment to people with problems which may recur, back problems for example. This is now the company practice.

Both these responses—better claims management and pre-employment screening—are rational ways to reduce workers compensation costs. Neither, it must be stressed, has anything to do with improving safety in the workplace.

The forces for safety

Big Buildings is a safety-conscious firm. If compensation costs are not the source of this concern, what is? A major part of the answer is union pressure. Following a serious accident the union will initiate a stoppage. A fatal accident involves a minimum of two days off: the day of the accident and the day of the funeral. The strike is seen by all as a safety strike and in these circumstances the company dares not withhold wages. On a big project the cost of a day's stoppage, in terms of wages and the hire of equipment which stands idle, may be $80 000 to $100 000. A two-day stoppage costs the company at least $160 000. Furthermore, according to the safety manager the men all need grief counselling—a further cost.

The costs associated with serious accidents are not all union-induced. Accidents are disruptive whether the men go on strike or not. In a small work team if one man is off, the schedule suffers a setback. And if these delays, both union-induced and otherwise, cause the project to run over its scheduled completion date there can be further financial penalties. But, although accidents are costly independently of the union response, it is the union response which exerts the most pressure on the company. As the safety manager puts it, 'a stoppage is what really hurts'.

This threat works in various ways. At one level it has forced the company to negotiate agreements with the union which guarantee training for various categories of workers and which sometimes enable union safety representatives, elected from among the workers on site, to devote themselves full time to training and safety matters.

At another level, it makes the company more amenable than it would otherwise be to safety suggestions made by union safety representatives. The union rep on the Project Skyscraper site told me that he could close the site down in five minutes if he needed to. The power of the union in this respect makes union reps far more effective in getting company action on safety than the company safety officers who are employed from time to time on large projects. The latter are lowly company employees with no clout and lacking the leverage which union safety reps can exert.

There is yet another way in which a knowledgeable union rep can have an effect on a project manager. The law in most states makes a manager personally liable if he knows of a violation but fails to take any action. (See Chapter 7 for a fuller discussion of the significance of personal liability.) Thus if a union rep informs the manager of a regulatory violation, or even a dangerous situation, and the manager does nothing about it, and if workers are subsequently killed or injured, the manager can be personally prosecuted. This threat of prosecution, when skilfully wielded, is a potent force for safety.

Actual prosecution of principal contractors following safety failures is also, on occasion, a force for safety, for it can raise in the minds of company directors the possibility that they may be personally prosecuted for breaches of the legislation or even for manslaughter. According to one construction company safety officer I spoke with, this fear of personal liability was a significant factor in safety improvements which occurred following a construction collapse and associated prosecution.

Another factor promoting safety is the current industry focus on 'model' projects which are distinguished by their adherence to 'best practice', 'continuous improvement', 'quality control' and so on (see Construction Industry Development Agency, *Model Projects and Enterprises*). In this climate a large company is severely embarrassed by a highly publicised safety failure. But more than this, such failures are costly. What lies behind the adoption of 'best practice' and the like is the desire to improve productivity and profit. Principal contractors aim for a smooth and predictable construction process which will allow projects to be completed on time and within budget. Where a floor collapses, or a crane topples over, a project can suffer substantial and very costly delays. Hence stringent quality control of the construction process is advantageous to the principal contractor. Preventing these kinds of occurrences also reduces the likelihood of serious injury to workers. Thus the drive for quality control, insofar as it is successful, will have a safety payoff for construction workers as well.

Robbie the Rogue: claims suppression

Although compensation costs exert no leverage at the level of the principal contractor, we have yet to consider whether they might have a direct effect on subcontractors who pay the premiums and

who might thus be thought to have a vested interest in improving safety. The largest subcontractor on the Project Skyscraper site at the time of this study was (let us say) Steelworkers Pty Ltd. Its boss, Robbie, was described to me as a bit of a 'rogue', but not unlike many other 'subbies' in the industry.

Steelworkers has had only one compensation claim in nine years, a man who was off work for six months following a fall in which he broke his shoulder. But this apparently excellent record is deceptive. Robbie knows that claims are likely to increase his premium. He therefore engages in claims suppression. In particular, he avoids claims by getting his men to take paid sick leave when they injure themselves. This means that there is no correlation between Robbie's compensation premium and the number of injuries his workers experience. There is thus no way that compensation costs can act as a safety incentive in Robbie's case.

An insurance company I contacted suggested that Robbie's practice is on the face of it economically irrational. Workers on sick leave get various allowances which they would not get on compensation. Thus, notwithstanding any upwards adjustments to his premium which might result from an increased number of claims, it would still be cheaper for Robbie to have his workers take compensation rather than sick leave. On the other hand, if workers are going to use their full sick leave entitlement by one means or another anyway, then getting them to use part of it for work injuries involves no extra cost to the employer. Furthermore, large companies are increasingly scrutinising the safety performance of subcontractors, measured in terms of the numbers of compensation claims they experience, prior to awarding contracts. From this perspective, Robbie's practice may turn out to be in his long-term interests after all.

I asked Robbie if there was anything he could do to keep his compensation costs down. Not surprisingly, he made no mention of safety. 'Shop around for a better deal from insurance companies' was his first response. He proudly explained how he had recently got a big reduction in premium by moving from one insurance company to another. (Project Skyscraper is in a jurisdiction where this is possible.)

The second thing he could do was to make sure that he didn't take on any 'compensation bludgers' in the first place, and to weed them out if any emerged. 'We know who they are', he said. 'We can tell 'em by the way they walk and the way they behave. You can pick 'em right away.' And 'we get rid of the lemons as quickly

as possible'. Sacking or threatening to sack compensation claimants is thus another prong of Robbie's claims suppression strategy. Given this strategy, it is little wonder that he has an almost clean slate when it comes to compensation claims.

Robbie's hostility to compensation claimants makes him quite irrational at times. 'How can a compo claim be legitimate if there are no witnesses?', he says. His scepticism about his employees' injuries stems in part from his practice of getting injured workers to take sick leave, thus confusing work injuries and sickness. When I asked him about recent *work injuries* he showed me a number of doctor's certificates which said simply that the worker was suffering from a 'medical condition'. 'How can you take them seriously when that is all that is on the certificate?', he asked. After all, 'dandruff is a medical condition'. Robbie's scepticism about sick leave claimants may well be justified on occasion; the sickness which keeps a man from work may sometimes be nothing more than a heavy hangover. But there is no good reason why this scepticism about sickness claims should carry over to job injury claims. The carryover results from Robbie's deliberate decision not to distinguish between the two. And there is little doubt that this results in genuine confusion, for when Robbie had finished brandishing the doctor's certificates in response to my question about work injuries his offsider quietly corrected him, explaining that none of the workers concerned had in fact suffered work injuries; all had simply been off sick.

The union safety rep on the Skyscraper project has other stories about the hostility of subcontractors to compensation claimants. Some subcontractors will ring the insurance company when a claim is made and dispute it, telling the insurer it is a 'bodgie claim'. On one such occasion, when the insurer was refusing to pay a claim, the union rep rang the company and threatened to blackban it; that is, to force the contractor to change its insurer. The threat worked.

According to the safety rep it is very difficult to gauge the extent of this practice of discouraging claims. Subcontracting firms often have migrant bosses who recruit workers from their own language group. The result is that the men work in ethnic ghettos and it is hard for an Australian-born union rep to know what pressures are being exerted within these ghettos.

So what, if anything, will make Robbie take action in respect of safety? 'The union', he said. 'The union can have the men in the shed at any time' (in the lunch shed, on strike). The men had in fact been 'in the shed' over another issue that morning. 'There's a

lot of union concern about safety here', he said. 'But the union mothers the men too much.' And 'Big Buildings kicks our arse when the union [the safety rep] makes a fuss'.

Robbie had just had his 'arse kicked' in this way at the time of our discussion. He had been using substandard timber scaffolding, which is quicker to erect than bolted metal scaffolds. Big Buildings had wanted the job done quickly and had turned a blind eye to what he was doing, he said. The union rep complained and Big Buildings intervened, requiring Robbie to use the safer scaffolding. Robbie resisted, but finally complied. The irony is that using the sturdier metal frames was probably cheaper for Robbie in the long run, since the Big Buildings crane could pick up and relocate the scaffolding as required, without the need for reassembly.

The South Sea Islander and the jackhammer

Moving to an even finer level of detail, let us look at the fate which befell one of Robbie's employees, a South Sea Islander named John. Robbie had employed John to break concrete with a jackhammer, in a process known as scabbling. A jackhammer vibrates and long exposure to it leads inevitably to vibration injury. John was asked to work all day long at this job. Within a couple of days he came to see the site nurse and complained of pains in the arms which were keeping him awake all night. The nurse asked Robbie to rotate the men on this job but he refused. *He* had once done this work without problems so why not these guys, he said. He suggested the solution was to sack John. 'I don't like these black bastards and if they're going to pull this caper they ought to get the hell out of here', he said. The nurse and the union rep prevented Robbie from sacking John, but Robbie then transferred him to another construction site where Steelworkers Pty Ltd was doing a job. Within a few days at the new site, John was sacked. Robbie's other employees were well aware of John's fate and the lesson was not lost on them.

Meanwhile, three other workers in turn had been asked to work with the machine all day long. Each had come in to the first aid centre complaining of pain and with swelling of the tendons visible to the nurse. Two of the three had had to take sick leave. Robbie continued to blame the workers because the fact that one had not had to take leave suggested that the others were exaggerating the problem. The whole situation was exacerbated for these workers by their knowledge that Robbie was planning to retrench four or

five workers at the end of the week and that their injuries cast doubt over their continued employment.

At this point the union rep called a meeting of the site safety committee which included a representative of the project management. The nurse had found that there were Australian Standards concerning the use of vibration machinery but that these involved costly measurement procedures which made them impractical to implement. So the committee decided to adopt an ad hoc policy that no worker should be required to work on the machine for more than one session a day; that is, for more than two and a half hours a day. It was also decided that Steelworkers Pty Ltd should be relieved of the job of scabbling. Big Buildings agreed to employ a number of extra trainees who would undergo a general training program and who would also do the scabbling. These trainees would report to Big Buildings foremen and not to the subcontractor.

Why did Big Buildings agree to this extra expense? In part, because the scabbling work was behind schedule and this was one way to speed things up. In part, too, because they could see that the situation had the potential to become increasingly disruptive to the building program.

A final observation concerns the importance of the nurse in bringing the problem into focus. None of these workers would have dared claim compensation, and so none of the injuries was defined as a lost-time injury. Consequently the problem did not show up in the lost-time injury records which are conventionally used to measure safety performance. These workers did, however, feel able to approach the nurse on the job for painkillers and other palliative treatment. It was only as a result of these treatments that the extent and nature of the problem became evident. It was the medical treatment data which made it clear that something had to be done, and it was the nurse who blew the whistle. In the absence of a site nurse Robbie would presumably have been able to injure and sack several more workers with impunity.

This point can be further illustrated. Robbie was expecting his workers to handle cold steel in frosty weather, without providing them with gloves. As a result their hands were cracking. His workers felt unable to complain either to him or to the union rep. But they did feel able to ask the nurse for cream to sooth their cracked hands and they did so in considerable numbers. In this way the problem came to light. This is a particularly clear example of a problem which would not otherwise have surfaced, since it was not serious enough to require men to take time off or to disrupt work in any

other way. Had first aid not been available, the men would probably have suffered in silence.

Conclusion

Several features of this story deserve to be emphasised by way of conclusion. First, it is very clear that workers compensation costs exerted no pressure for safety at any stage, partly because of the structure of employment and partly because of the problem of claims suppression. It would thus be foolish to place any reliance at all on compensation as a mechanism for ensuring safety in this industry.

Second, the main force for safety revealed in this study is the union. This force operates in at least two ways—via agreements negotiated between the union and employers and via the activities of union safety reps on site. The leverage exercised by these reps stems in part from their ability to close down the site. This is a seldom-used last resort, but it gives them an influence they would otherwise lack.

Third, the system of government-imposed regulation is another major resource available to union reps. They are in a much better position to police these regulations than are government inspectors, who can visit a site only occasionally. The fact that the union reps can call in the inspectorate when needed, and furthermore can invoke the personal liability of managers by making them aware of violations and thus legally responsible for any injuries which may occur, makes the regulatory system a potent resource in their hands.

Fourth, although I have argued that in the case under discussion the economic costs of compensation are quite irrelevant, that is not to say that *more general* cost pressure is irrelevant. The power of the union movement in this industry stems ultimately from its ability to disrupt a building schedule which can be extremely costly to the principal contractor. In this sense cost pressures do provide a safety incentive. But these pressures do not exert themselves in any automatic way as the believers in market forces might like to think. They operate only because the unions are in a position to impose them should building firms slacken in their commitment to safety.

Finally, it should be stressed that the two major limitations of the compensation approach to safety identified here are not confined to the building industry. First, wherever work is done by subordinate firms on a contract basis, as is increasingly the case in

many industries, the cost of compensation cannot function as a safety incentive as far as the principal firm is concerned. Second, the practice of claims suppression also is not unique to the construction industry and, wherever it occurs, must nullify the potential of the workers compensation system to deliver safety incentives.

10

Does safety pay: the case of coal mining

JOHN SARGENT

The coal mining industry offers a useful illustration of the limitations of the view that 'safety pays'—of the view that economic self-interest provides an effective incentive to companies to improve occupational health and safety. There are two strands to the safety pays argument. The most familiar is the notion that workers compensation costs provide significant safety incentives. In the first part of this chapter I shall explore in some detail the limitations of this notion in the context of coal mining and argue that safety in this industry depends as much or more on government intervention.

But the safety pays approach is not restricted to the question of compensation costs. The second strand of the argument is that safety enhances productivity. This proposition has been advanced with particular insistence in relation to coal mining, and the latter part of this chapter will be devoted to scrutinising the claim in this context.

Eastern Colliery: converting LTIs to injuries without lost time

Let us start by looking at the practices of one underground coal mine in New South Wales, which I shall call Eastern Colliery. Eastern is not alone in these practices, but just how widespread they are cannot be known on the basis of a single case study. Eastern ranks in the best-performing quartile of NSW underground mines in terms

of its lost-time injury frequency rate. From this point of view its safety record is considerably better than the industry average.

Although it is part of a larger company, Eastern Colliery pays its own compensation premium to Coal Mines Insurance, on the basis of its own claims experience. Compensation costs matter greatly to Eastern; keeping them down is seen as making an important contribution to overall profitability. Some years ago its premium was running at about 6–7 per cent of payroll; it is now down to 3.5 per cent. In terms of dollars saved, recent years have seen the premium reduced by between $100 000 and $150 000 each year. Clearly Eastern is doing something right. How have these savings been achieved?

The main strategy is the formal review which follows every injury. The review consists of a round table discussion involving the injured man, his immediate supervisor, the shift supervisor, the safety officer and the mine manager. It includes an analysis of how the injury occurred, things which can be done to prevent a recurrence, the nature of the injury and the kind of alternative duties the injured worker may be able to perform until he has recovered sufficiently to resume normal work. The review is conducted in a formal manner and I was told that the men find the process rather intimidating. This is quite intentional. It is designed to reinforce to all concerned the need to take safety seriously. It is designed, furthermore, to get men back to work as quickly as possible and to cut down on what the manager calls 'recreational compensation'; that is, taking more time off work than is necessary. To this end, the manager does not accept a doctor's certificate that simply says that a miner needs a week off work. He makes his own judgement, in consultation with the injured worker, as to what kinds of alternative duties the worker might be able to perform, and whether he in fact needs any time off work at all.

Eastern also runs an incentive scheme to encourage workers to act safely and to avoid lost-time injuries. Each miner who goes a year without a lost-time injury (LTI) is rewarded with $250 and any shift which goes three months without an LTI is similarly rewarded. Injuries which do not result in lost time are ignored for the purposes of these rewards.

These practices have contributed to the steady reduction in the number of LTIs which Eastern has experienced. The mine's frequency rate is now so low that some months are entirely free of LTIs. A chart on the manager's wall displays the figures for all to see. But he could not immediately provide me with figures on the

number of injuries which occasion *no* lost time. It was thus not clear to what extent the improvement reflected real improvement in safety as opposed to the conversion of LTIs into injuries without lost time. When I asked another mine officer whether the incentive system was serving simply to keep injured workers at work as opposed to making them more careful he replied, 'a little of both', and then, after a pause, 'more of the first'. A subsequent examination of Joint Coal Board statistics revealed that Eastern had almost halved its number of LTIs in one recent year without any change in the total number of injuries.

It must be acknowledged that the review process described above does lead to real safety improvement. For instance, as a result of the process the mine has issued safety glasses to all miners and provides all workers who need them with prescription safety glasses. It may also be the case that management's attention to these issues has led to improvements in housekeeping and a consequent reduction in trips and falls. But the main outcome has been improved management of injuries. In short, the incentives provided by the compensation system have resulted in much improved injury management but possibly only quite marginal improvements in safety at Eastern Colliery.

Technological change at Eastern

There is another reason why LTI rates have been coming down at Eastern, a reason which has nothing to do with injury management or, for that matter, safety policy: technological change is making the mine a safer place. Mining at Eastern has traditionally been by the pillar extraction method. The method involves driving a rectangular network of tunnels to the extremity of the lease. The blocks of coal left standing, pillars, are then extracted in retreat, the roof collapsing in what is intended to be a controlled fashion. Two features of traditional pillar extraction are relevant here. First, it involves miners in a good deal of manual work putting up timber props to provide support for the roof where pillars of coal are to be extracted. This work in the normal course of events generates a steady stream of material-handling injuries. Second, the coal is actually excavated by a large machine called a continuous miner which, despite the props, must work at times under unsupported roof. Thus continuous miners and their drivers are sometimes caught in roof falls. Over

the years in the NSW coal fields quite a number of miners have been killed by roof falls occurring as pillars of coal are extracted.

Eastern has been using a more technologically advanced system of roof support in the pillar extraction phase for the last three years. The system consists of a series of radio-controlled jacks, mounted on caterpillar tracks, called 'breaker line supports'. They can be jacked up and down and moved, all by remote control, one at a time, as pillar extraction progresses. The new system does away with the need for timber supports in pillar extraction. This means that the men suffer fewer material-handling injuries. Indeed, the manager said that during this phase of the work they do no heavy manual work at all. The system also means that continuous miners do not have to work under unsupported roof. Since the introduction of breaker line supports there has not been one case of roof fall on a continuous miner at Eastern Colliery, whereas previously these machines were buried by major falls of stone on average once a year. The new technology has resulted in a much safer system of work. This is not of course why it was introduced. The fact is that it is also a more productive system of work; coal extraction proceeds more quickly and the production rate at Eastern has increased by 25 per cent since the introduction of the new support system. The safety improvement is thus a by-product of a technological advance which occurred in order to enhance productivity and profit. This is an important point to which I shall return later.

Safety failures at Eastern

The LTI frequency rate is not a reliable indicator of the level of safety at Eastern, in part because of the extent to which it is influenced by claims management procedures which result in the conversion of LTIs into injuries without lost time. A further defect is that it fails to highlight major safety failures which need to be taken seriously, regardless of how many lost-time injuries may be occurring. For instance, fatalities are relatively rare, and most mines go for years without a death. However, when they occur they are usually indicative of serious safety deficiencies. Moreover, there are certain kinds of dangerous occurrences with the potential to lead to death or injury which must be reported to the inspectorate, regardless of whether injury has in fact occurred. Every such dangerous occurrence raises questions about standards of safety.

At the time of my discussions at Eastern two such failures had

occurred in the recent past. The first was a dangerous occurrence in which a large metal bucket fell from top to bottom of the entry shaft doing substantial damage but luckily injuring no one. The mine was out of production for two months, after which it went back into restricted production. The restriction was dictated by the mines inspectorate because Eastern Colliery's engineers were unable to ascertain accurately the strength of the bucket's support equipment. In a second incident a contract worker was killed driving a front-end loader when his head struck the tunnel roof. An inquiry revealed, among other things, deficiencies in the safety training given to contract workers, for which mine management is ultimately responsible. These two events suggest that Eastern could still be considered a dangerous place to work at despite the substantial improvements in the LTI frequency rate. By way of clarification, I am not arguing that Eastern is more dangerous than other mines—it may well be less so. The point is simply that LTIs and compensation data do not capture some of the matters which are most germane to safety.

The importance of the inspectorate

The principal argument so far is that, if Eastern Colliery is any guide, compensation costs do relatively little to focus management's attention on safety (as opposed to claims management). What, if anything, *does* focus the mind of a coal mine manager on safety?

Certainly a dangerous occurrence or a fatality will focus management attention very sharply. This is in part because the events themselves are so unwelcome. In the case of a fatality, the human tragedy affects everyone. Moreover, such events generate bad publicity and are costly in terms of down time. Over and above this they trigger inquiries by the coal mines inspectorate which often result in advice or directions to managers. This advice or instruction is taken seriously. Prosecution is a relatively rare occurrence—neither Eastern nor its parent company has been prosecuted—but managers know that they can be personally liable in the event of non-compliance and this is a powerful motivator. As the manager of Eastern said to me, 'the last thing I want is an inspector telling me he's going to prosecute me'.

The importance of the inspectorate in drawing a mine manager's attention to safety is most apparent in situations where the mine has not in fact suffered a fatality or dangerous occurrence. Consider the problem of outbursts, one of the most serious safety issues in

underground coal mining in Australia at the present time. Mining can trigger a sudden release of carbon dioxide or methane gas which has been under pressure in the coal seam. This can cause coal to blow out of the face, with consequent damage to men and machinery. But, more importantly, the inrush of these gasses into an area where mining is taking place makes the atmosphere unbreathable and miners can die of asphyxiation. Outbursts can also raise the levels of methane gas in the atmosphere to ignitable levels, with the consequent risk of a major explosion. Several miners have died in recent years in NSW coal mines as a result of outbursts, including three who were asphyxiated in a single incident in 1991 at South Bulli. As a result of this triple fatality the mines inspectorate required all mines operating in the Bulli seam to develop outburst management plans. It also conducted a series of seminars for mine managers in order to describe the problem and to explain the new requirements. Some mines which had experienced outbursts had already developed management plans, but the activity of the inspectorate was vital in getting other mines to take action. Eastern was one such mine. Although it has not had an outburst, the manager recognises that they are now mining in an area where the potential exists. The mine has decided, among other things, to seal the cockpit of one of its continuous miners and to provide it with a self-contained atmosphere, at a cost of $80 000. The remaining machines will be refitted later. The manager is also providing backup breathing apparatus not far from the work face and oxygen self-rescuers at a cost of about $60 000. To repeat, the role of the inspectorate in mandating this kind of response has been particularly important in mines which have so far had no direct experience of the problem. It goes almost without saying that compensation costs have played no part in focussing Eastern Colliery's attention on the problem of outbursts.

The regulatory regime

At this point the nature and significance of the regulatory regime needs to be addressed. There are two quite separate bodies concerned with coal mine health and safety in New South Wales. One is the coal mines inspectorate, located within the Department of Mineral Resources, responsible for the enforcement of the *Coal Mines Regulation Act*. The other is the Joint Coal Board which, among other things, is responsible for workers compensation

insurance, through its subsidiary company Coal Mines Insurance, with which all mines are required to insure. Until 1992 the Board oversaw all other aspects of coal mining, including production and marketing, but it has now been stripped of these functions as part of a move towards deregulation.

One crucial and beneficial consequence of this division of responsibilities is that the coal mines inspectorate is in no way driven by a concern to minimise compensation costs and is not focussed on the mere reduction of lost-time injuries. Its principal concern is with fatalities and dangerous occurrences. Any suggestion that the inspectorate should target its activities using lost-time injury data, as is happening with some other safety inspectorates, would clearly be detrimental to the inspectorate's focus on serious *hazards*. So, too, would any suggestion that the inspectorate be amalgamated with the agency responsible for compensation, as has happened in varying degrees with other Australian health and safety inspectorates (see Chapter 12).

The regulation of coal mine health and safety provides what would appear to be an ideal model. The Joint Coal Board, through its workers compensation insurance company, is focussed on reducing compensation costs. This approach can be expected to have some impact on routine lost-time injuries. On the other hand, the coal mines inspectorate's job is to protect workers from serious hazards, regardless of whether these hazards represent a significant cost to the industry. This institutional division of labour is in the best interests of all concerned.

A note on black lung

It is worth observing that coal mining provides one of the most spectacular success stories in the history of government attempts to secure the health and safety of workers by means of regulation. In past generations the dust disease, black lung, was a major health problem and cause of death among miners. The postwar years saw a campaign by the Joint Coal Board to eradicate this problem. Water sprays to suppress coal dust were made mandatory in all underground coal mines and levels of dust were carefully monitored. The result has been the almost total disappearance of this disease in New South Wales. But this happy state of affairs depends on continued government vigilance. The introduction of long wall mining in the 1980s threatened to increase the levels of dust again

and it was only the intensive activity of the Joint Coal Board which kept the problem from re-emerging. Joint Coal Board investigators carry out a massive program of dust sampling at all mines on all shifts and at Eastern Colliery, for example, took 118 samples in one year. Only three or four of these failed; that is, revealed unacceptably high levels of dust. Where failures *are* occurring the Board staff may concentrate their efforts, doing additional testing and giving advice to management on how the problem can be rectified. To repeat, it is the activities of government investigators and regulators, and not any current compensation pressures, which are protecting miners from black lung.

The Joint Coal Board's responsibility for black lung does not fit neatly into the institutional division of labour described in the preceding section. Historically, this has not been problematic in any way. However, recent changes in funding arrangements for the Board now pose a potential threat to the effectiveness of the dust-monitoring program. Until 1992 the activities of the Board were funded in part by government appropriation. The Board must now fund itself entirely from profits on the investment of workers compensation insurance premiums and from any fees which it can generate from services to industry (45th Annual Report). As a result there is now a proposal that dust monitoring be regarded as a service to industry for which a suitable fee should be charged.

It is wrong, however, to place dust monitoring on a fee-for-service basis. Dust monitoring is not a service to *employers*; it is a means of protecting *employees* and must be seen as a responsibility of the State. Employees are the clients whose interests are being served, and to redefine the company as the client, as fee-for-service does, is a fundamental error. This is not just a terminological quibble, for certain very important practical consequences follow. If dust monitoring is a service to industry, then industry might well decide that it does not want this service or, at least, not as frequently. It might well mount an argument that the service is not cost-effective and that dust can be kept more or less under control with much less sampling. Industry might also argue that since it is paying for this service it would prefer to use a different service provider, some private firm whose service was cheaper. This argument will be be difficult to resist. Once this happens, governments will tend to lose control of the process and the adequacy of dust sampling is likely to deteriorate. The worst thing about such deterioration is that it will not be immediately evident. It takes years of exposure to dust before the symptoms of black lung become

apparent. This long latency period means that a great deal of damage may be done before new cases of black lung begin to be diagnosed and to show up in compensation claims. In short, fee-for-service is a dangerous path to go down, threatening to undermine the Board's success in eliminating black lung from the coal fields, a success of which it is justly proud.

The productivity argument

Various commentators are now arguing that management attention to health and safety pays off in terms of higher productivity and hence profit (e.g. Oxenburgh 1991; Mathews 1993). The coal mining industry is cited in support of these claims, in part because of the very good data available from the Joint Coal Board (Mathews 1993, p. 49; Ore 1992, p. 8; Worksafe Australia Newsletter, vol. 7, no. 4 p. 4; no. 5 p. 2).

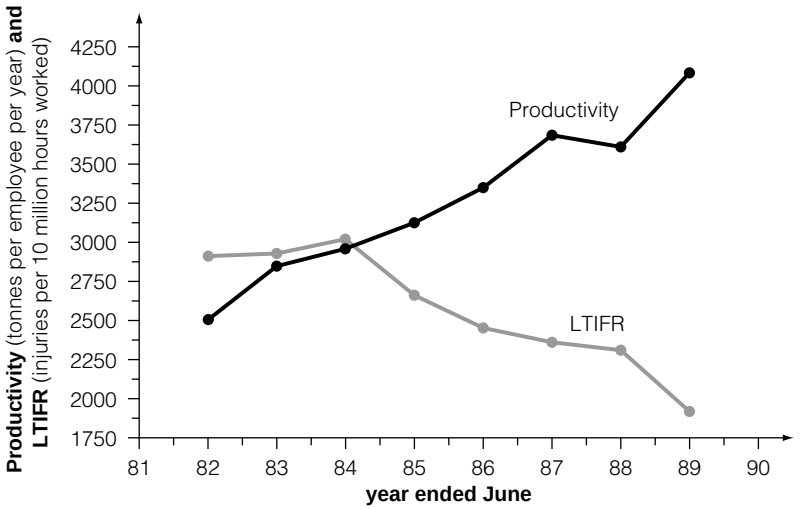
The argument has far-reaching implications for government strategy: it supports a policy of self-regulation and, taken to its logical conclusion, implies that there is no need for government-imposed regulation at all. All that the authorities need do is to point out to industry that safety pays in terms of higher productivity, and company self-interest can then be expected to do the rest. Given the importance of these implications, the argument deserves close scrutiny. The remainder of the chapter is devoted to this task.

Some of the data which apparently support the productivity claim relate to NSW coal mines over the decade of the 1980s and into the 1990s. Figure 10.1, which presents the data relied on by Mathews (1993, p. 48), shows that during the period 1982–1989 the lost-time injury frequency rate, i.e. the number of lost-time injuries per million hours worked, went steadily down while productivity went steadily upwards.

While it is undeniably true that there is a correlation between safety performance and productivity during this period, the inference that improved safety performance led to higher productivity simply does not follow. In fact, there is no causal connection between the two variables at all. The easiest way to show this is to extend the period of the analysis to cover the decade of the 1970s as well, as we shall do in a moment.

The figures used by the commentators cited earlier refer to all mines, both underground and open cut. Open cut mines use larger machinery and are thus more productive than underground mines.

Figure 10.1 Productivity and safety, all NSW coal mines



Moreover, the productivity trends over time for open cut mines are rather different from those for underground mines. The two types of mine should therefore be analysed separately. Furthermore, the great bulk of employment in the industry has been in underground mining and it is therefore underground mines which are of central interest here. Consequently, in later discussion we will restrict our attention to underground mines. However at this point, for the sake of completeness and in order to maintain continuity with other commentators, the data are presented both for underground mines and for all mines. The graphs which follow were constructed using data extracted from various Joint Coal Board publications, supplemented with unpublished data supplied by the Board.

Figures 10.2 and 10.3 show that from 1972 to 1992 the LTIFR (lost-time injury frequency rate) and productivity (measured in terms of output of saleable tonnes of coal per employee per year) followed unrelated trajectories.

Looking at the period 1972–1982 we see a slight increase in productivity in all mines and no change in underground mines, despite a doubling of the LTIFR—quite contrary to the presumed connection between safety and productivity. Furthermore, the LTIFRs in 1990 were almost exactly the same as they were in 1972, despite a doubling in productivity. Finally, it should be noted that, contrary to the safety pays hypothesis, the increase in productivity

Figure 10.2 Lost-time injury frequency rates for underground and all NSW coal mines

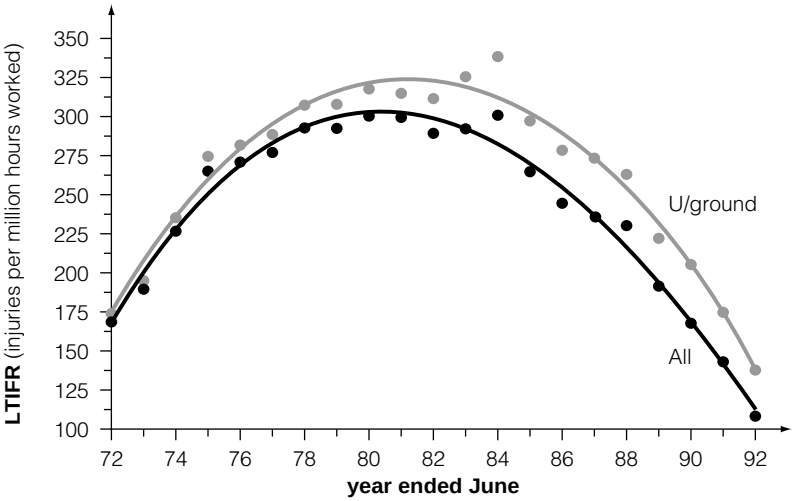
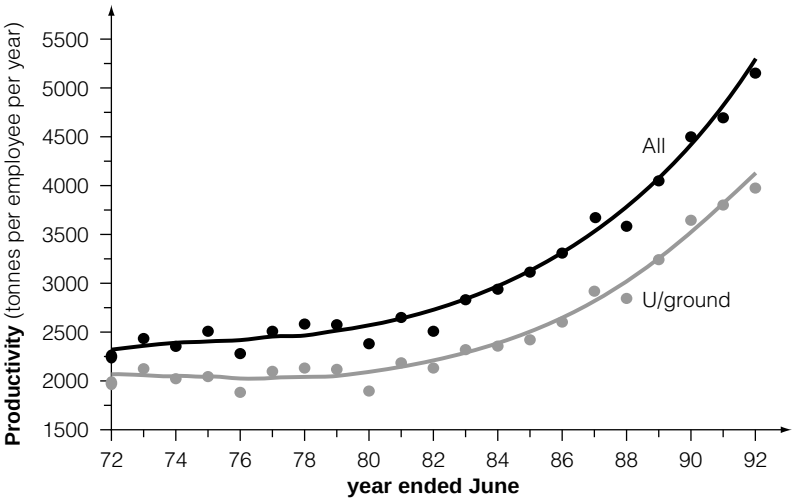


Figure 10.3 Productivity of underground and all NSW coal mines



began in 1983, two years before the decline in LTIFRs set in. Looking at the data over this longer period makes it clear that it is highly doubtful that there is any relationship at all between the two variables.

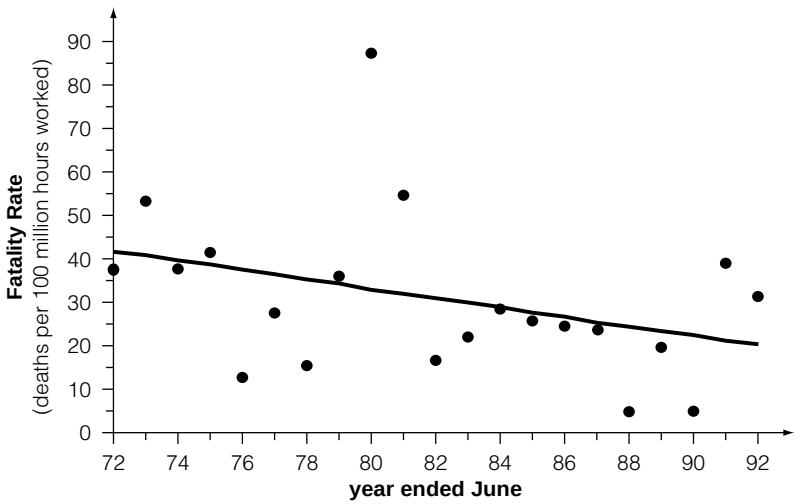
But this is not the end of the matter. Although there may be no relationship between the two variables, their distinctive trajectories invite explanation. This will be done in the next two sections.

Explaining the lost-time injury curve

The shape of the LTIFR curve is particularly intriguing. At face value it suggests that mining became steadily more dangerous till about 1984, after which safety steadily improved. This seems a rather implausible interpretation. An alternative hypothesis is that the LTIFR is more a function of claiming practices and injury management, and that these changed in various ways during the period under consideration. To help decide between these competing interpretations, it is instructive to examine the fatality frequency rate which is a less ambiguous indicator of safety, since it is not susceptible to variations in claiming practice and injury management. The number of deaths per million hours worked (multiplied by 100) is presented in Figure 10.4.

Because of the relatively small number of fatalities the rate fluctuates wildly from year to year, the extreme case being 1979–80 when 14 men were killed in an explosion at Appin. However, when

Figure 10.4 Fatality rates for underground coal mines, NSW, 1972–92



a quadratic equation (a parabola) is fitted to the data it yields a straight line trend over the whole period. Note that fitting a quadratic equation would allow the curve to rise in the first decade and fall in the second, if that were indeed the trend in the data. On the basis of this indicator one would have to conclude that the level of safety has improved slightly but steadily throughout the period. This reinforces the view that the LTIFR curve is an artifact of other practices. Let us fill out this possibility in a little more detail.

With effect from 2 July 1973, miners sustaining accidents were entitled to compensation at the rate of full award wages plus the production bonus (Joint Coal Board 1984, p. 9). Prior to this time, weekly compensation payments were substantially below a miner's normal income. Prior to July 1973, in other words, there was a substantial disincentive to miners taking time off work when injured; after that date there was no such disincentive. This is the most likely explanation of the dramatic rise in LTIFR which occurred between 1973 and 1975. From 1975 onwards the rate of increase slows, consistent with the hypothesis that it was the change in the compensation system and hence claiming behaviour in mid-1973 which was the principal cause of the rise which occurred in the decade of the 1970s.

Let us note, before continuing, that this does not necessarily imply that the rash of claims after 1973 was in some way illegitimate, as some commentators have suggested. It is just as plausible to suggest that prior to the scheme's introduction men with genuine injuries felt compelled by the inadequacy of existing compensation benefits to stay at work when, from a medical point of view, they ought to have taken time off. It is not necessary to resolve this issue here, however. The point is simply that there was a change in claiming practices and that this is most probably attributable to the change in benefits.

It seems likely that the downward trend evident since the mid-1980s is to a considerable extent attributable to improved injury management, of the type described at Eastern Colliery. The Joint Coal Board has conducted seminars for colliery managers on how to reduce claims costs, and it is well known in the industry that some of the best LTIFRs have been achieved by strenuous efforts to keep the injured at work, on alternative duties if necessary. Joint Coal Board data provide evidence of the extent of this process. Between 1981 and 1992 the proportion of claims which resulted in lost time fell from 86 per cent to 56 per cent (Joint Coal Board 1992, p. 6). What this means is that, whereas in 1981 the great majority

of reported accidents resulted in days off, by 1992 only half the reported claims resulted in lost time, the remainder being claims for medical and other expenses. The main reason for this is that workers who would previously have gone off work following an accident are now being given medical treatment and encouraged to come straight back to work on alternative duties, without any lost time.

It should be stressed that these comments do not imply any judgement about the policy of getting workers back to work on alternative duties. This may be good policy from many points of view, not least the injured worker's: it prevents the demoralisation which can sometimes set in when a worker is off for long periods. All that I am saying is that the conversion of lost-time injuries into injuries without lost time makes the LTIFR quite useless as an indicator of safety trends.

Nor should the preceding comments be read as suggesting that there have been no safety improvements in the industry since the early 1980s. Joint Coal Board figures indicate a substantial reduction in the total number of claims, both lost time and non-lost-time. The fact that claims for accidents which do not result in lost time (medical expenses only claims) are also coming down suggests that there may have been real safety improvements. However, medical expenses claims may also have been affected by changes in management practices in this period, in ways that have not been explored here, which means that they, too, are an unreliable indicator of safety trends.

To summarise, it is unlikely that the remarkable shape of the LTIFR curve corresponds in any substantial way with safety trends in underground mines. The most likely explanation for the shape of the curve is the changes in the compensation system and in the intensity of claims/injury management which occurred over the period. This analysis provides a stark warning to anyone who seeks to draw inferences about safety from LTIFR data. These data are far more sensitive to changes in claiming behaviour and claims management practices than they are to safety, and variations in the data are likely to be indicative of changes in these practices rather than of changes in safety practices.

Note, finally, the words of the chief inspector of coal mines in New South Wales in an address to the fifteenth annual colliery symposium in 1994

> It is curious that in the last ten years the LTIFR for the industry has been reduced to approximately one third of its former value, yet the number of reported serious bodily injuries, normalised to industry

employment, has barely reduced, if at all. One can only conclude that these two indices are a measure of fundamentally different things.

There can be no doubt that the LTIFR is not just a measure of how safety has been, and is being, managed. It is also a measure of the industry environment, and of the workers compensation environment. Unfortunately, in addition to reflecting managing safety the LTIFR also reflects efforts to simply manage the measure, with no regard to safety.

What is meant by managing the measure? Quite simply it is things done which have nothing to do with safety management, things which have nothing to do with responsible rehabilitation of the injured, and which are intended only to make the numbers look good.

In its simplest case it involves extremely creative approaches to rehabilitation that bring new meaning to the term 'walking wounded'. In the most extreme case it may involve a company in effect acting as a self insurer in order to hide injuries from the Joint Coal Board workers compensation system and the statistics that come from it.

Explaining the productivity curve

Productivity, or output per worker, is sometimes naively assumed to be a measure of how hard a person is working. The fact is that the major productivity trends have nothing to do with the effort made by workers. The primary factor which influences output per worker is the technology in use, or more simply, the kind of machinery which he or she is operating. As mentioned earlier, the technology of open cut mining and underground mining is quite different, and the productivity of the two types of mine must therefore be analysed separately. In what follows we look only at underground mines.

Underground mining during the 1970s was carried out, as we have noted, by the pillar extraction method using continuous miners. By the end of the 1970s there was a widespread realisation that mining had reached a 'technological plateau' (Joint Coal Board 1981, p. 5). The beginning of the 1980s saw the progressive introduction throughout the coal fields of a new and more productive technology, long wall mining, and output per worker rose dramatically wherever the new technology was in use. The details of this method need not concern us here; suffice it to say that it gave underground mining a new lease of life. The progressive introduction of long wall mining during the course of the 1980s corresponds exactly with the steady increase in productivity which the data reveal. This is the real explanation of the rise in productivity, not

any increased attention to safety as hypothesised by the commentators mentioned earlier.

Moreover, the new technology is inherently safer than the old. It does not require people to work under unsupported roof and it thus reduces the risk of miners being caught in roof falls. Further, it does away with the need for much of the heavy roof support work which miners had previously done. It may thus have led to some reduction in the rate of routine material-handling injuries. It is likely, therefore, that the new technology has played some part in the reduction in the rate of lost-time injuries which has occurred since the mid-1980s, although the effect is probably slight in comparison with the impact of changes in claims/injury management practices.

Insofar as long wall mining may have contributed to a reduction in the injury rate it demonstrates an effect almost the reverse of that which the commentators hypothesise. Whereas they suggest that attention to safety will lead to greater productivity, what is apparent here is that the quest for greater productivity leads, at least potentially, to greater safety. Improved safety is an incidental by-product of increased productivity, not its cause.

Further data on productivity and safety

There is one other set of data which it is sometimes suggested demonstrates a relationship between productivity and safety in coal mining (Emmett 1992, p. 306; Mathews 1993, p. 49). If, for any one year, the productivity of each mine is plotted against its LTIFR, a correlation is apparent (see Figure 10.5): the more productive mines tend to have lower LTIFRs. (Data taken from NSW Department of Mineral Resources 1994, pp. 213–14 and Joint Coal Board 1993, pp. 10–12.)

But the relationship is misleading. It has already been explained that open cut mines are inherently more productive because of their mining methods. They are likely to have lower LTIFRs for similar reasons. Their presence in the data thus confuses the issue. Figure 10.6 shows the picture for underground mines only. These data reveal no relationship between productivity and safety.

Figure 10.5 Productivity and safety, all NSW coal mines, 1992–93

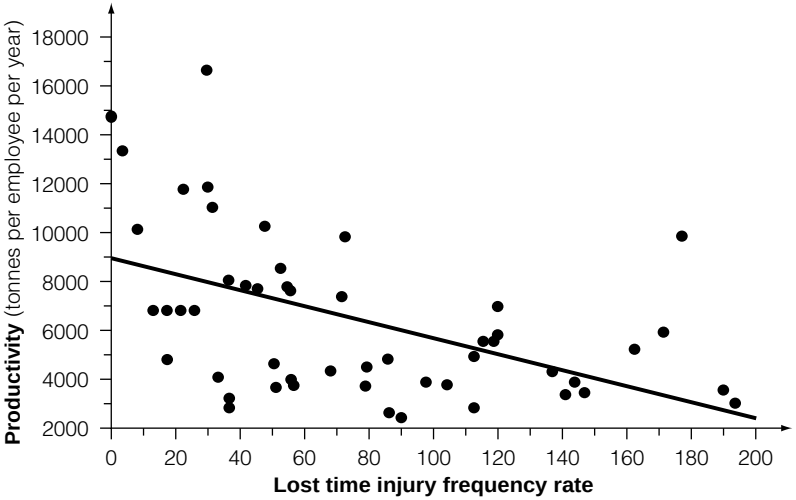
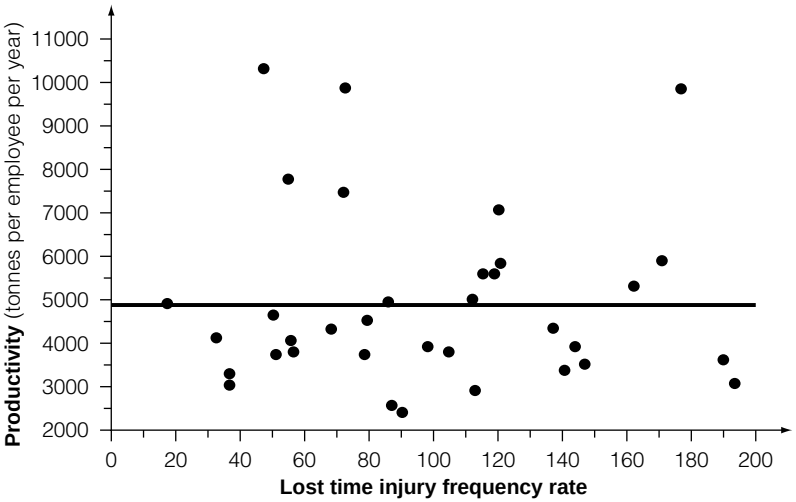


Figure 10.6 Productivity and safety, underground NSW coal mines, 1992–93



Conclusion

Let us draw together the threads of this discussion. We have seen that a concern about compensation costs leads to improved

claims/injury management practices but not necessarily to significant safety improvements. We have seen, too, that LTIFRs are completely inadequate measures of safety performance, and that the reduction in LTIFRs is to a considerable extent a result of the policy of keeping the injured at work wherever possible, thus converting LTIs into non-lost-time injuries. Finally, we have concluded that the figures in no way support the argument that greater management attention to safety will enhance productivity. The data thus provide no logical reason why managers who are concerned with improving productivity should turn their attention to improving safety.

The implications of these findings for OHS policy are profound. Company self-interest cannot be relied upon to generate safety incentives. Any policy of self-regulation which presumes that it can must fail. It is the existence of OHS legislation and the activity of the inspectorates which focus management's attention specifically on safety. The role of the inspectorates is vital, particularly in relation to the most serious hazards such as roof falls, gas outbursts and explosions, all of which generate relatively few LTI claims but which can result in loss of life, sometimes more than one life, when they occur. It is these occurrences which make mining a hazardous occupation and it is here that effective regulation by government is crucial.

11

Strategies for safety specialists

Managers are influenced by a variety of motives, among them economic incentives, fear of legal consequences, moral commitment and concern for their own good reputations. There are numerous ways in which these motives can lead to action to improve occupational health and safety. But none of this is automatic. These motives will come into play only if management's attention is drawn to the relevant information. There is thus a vital role for safety specialists within firms in organising and presenting this information. Several kinds of safety specialists can be identified: safety officers, health and safety managers, occupational health nurses and union health and safety representatives. All these people have a particular interest in OHS as well as varying degrees of expertise. All have a part to play in bringing OHS to management notice. In this chapter we will look at some of the strategies which they can use. In doing so we will be drawing together some of the insights developed in previous chapters. A certain amount of repetition is therefore inevitable. We will focus on health and safety officers and managers, in part because we have already touched on nurses and worker health and safety representatives in previous chapters, but also because there is a wider range of strategies available to such people. But health and safety representatives and occupational health nurses will also be able use these ideas in appropriate circumstances. The discussion will be organised around four main themes: managers' fear of legal consequences for themselves; their concerns about economic costs and benefits to the company; concerns which they have for their reputations as good managers; and the possibility of

tying managers' career prospects and salaries to their safety performance. These themes of course overlap. The need to measure managers' performance leads naturally into a discussion of safety indicators towards the end of the chapter.

Fear of legal consequences

In my discussions with company managers the fear of being personally prosecuted, when mobilised, loomed as probably the strongest motivation to take OHS seriously. The possibility of prosecuting individuals exists in all OHS legislation but many managers are only dimly aware of it, if at all. It is only when management consultants and safety specialists within a company bring the possibility to management's attention that it influences their behaviour. It is most influential when these safety specialists can also tell them what to do to avoid personal liability. As discussed in Chapter 7, in most cases what senior managers need to do to be sure that they are not liable in the event of some accident or injury is to exercise 'due diligence' in providing safe working arrangements for their employees. What this means in practice is setting up systems for managing health and safety and auditing these systems to ensure that they are in fact operating satisfactorily. It requires considerable expertise for safety officers within companies to be able to specify what is involved in exercising due diligence, and they may find that the best strategy is to convince managers that they need to know and then to organise safety consultants to tell them.

One simple strategy for OHS officers is to notify their senior managers when the firm is in breach of regulations or even not observing some code of practice, and to make sure that they receive the notification—that is, that they really know. Managers who know of such a state of affairs and take no action are certainly liable to personal prosecution in the event of an accident. If they do not realise this, safety specialists must find a way to educate them about their personal liability. Some safety specialists I interviewed had a policy of clipping stories about the prosecution of managers from newsletters and magazines and passing them on to senior executives. Any lessons which can be drawn from the circumstances of these prosecutions can also be passed on. State authorities provide useful summaries of prosecutions of both companies and individuals in their various newsletters.

Knowing the relevant regulations or codes of practice is a

precondition for wielding the threat of legal liability effectively. As mentioned earlier, one OHS officer said to me, pointing to the regulations on his shelf, 'my little friends here are the strongest argument I have. Where I can point to a violation I get immediate action from management'. Knowledge of the overlapping regulations in relation to public safety and environmental protection may be even more effective in this respect (see Chapter 6).

The possibility that the company itself might be prosecuted in the event of an accident can also be an influence on management, though to a lesser extent than the fear of personal liability. There are changes which prosecuting authorities could make which would make these company prosecutions more effective. But, even as things stand, a prosecution of a company reflects badly on its management and thus, in a more indirect way, can provide a personal motivation for managers to do something about OHS. For this reason safety specialists can usefully pass on information about company as well as individual prosecutions to senior management.

A less threatening option is to call in a government inspector for advice. While one OHS officer I spoke with thought that this would be 'a career-limiting move', most said that they found it advantageous to do so on occasion. As one put it, 'we invite them out when we are planning any major changes; we want to do things the right way the first time because we don't want to have any problems with the inspectorate later'. Management will usually be willing to comply with advice given by inspectors, particularly if they know that failure to comply may lead to stronger action such as an improvement notice or an on-the-spot fine.

Economic costs and benefits

Insofar as workers compensation costs can function as a safety incentive they can do so only if safety or compensation officers ensure that they impact on management thinking. There is an immediate implication here for large organisations concerning the administration of compensation costs. These costs must be taken from the budgets of local area managers on the basis of their actual claims experience if they are to function as an incentive to these managers to consider the safety implications of decisions they make. If the costs are paid by head office, or even paid by an area manager on the basis of the number of employees in the area, they cannot function in this way. This matter was discussed more fully in Chapter 3. Health and

safety managers of large organisations who wish to maximise the impact of compensation costs within the organisation should strive to have company accounting systems set up accordingly.

Many managers do not understand how claims affect their premiums. Schaapveld (1993) reports that most of the managers he interviewed in his small-scale study were horrified when the effect was pointed out to them. It is thus important for OHS officers to know the details and to be able to demonstrate them to management. The premiums paid are affected by actual claims costs to different degrees in the various Australian jurisdictions, but most jurisdictions are moving towards the situation where, for large employers at least, the premium will be very largely determined by the actual claims experience of the enterprise. To the extent that this is the case, increased claims costs translate directly into premium rises. OHS officers need to understand the way in which premiums are calculated in order to demonstrate this connection.

But health and safety officers must realise that a focus on compensation costs does not necessarily translate into a focus on safety. In many circumstances the most efficient way to reduce claims costs is claims management—getting people back to work as soon as possible after an injury, setting up a system of alternative or light duties and taking active steps to encourage rehabilitation. These measures, as we have noted, do not necessarily result in a safer workplace. However, OHS officers may find that an initial focus on claims management will bring a quick reduction in costs and hence greater credibility for themselves when they make cost arguments in relation to matters of health and safety. Managers who have seen compensation costs come down as a result of the claims management work of their OHS officers are naturally more receptive to arguments about the savings to be made from better health and safety.

An analysis of compensation claims can also be useful in pointing to ways in which OHS improvements will generate compensation savings. The OHS manager of the NSW Forestry Commission noted that among the Commission's direct employees back injuries were especially prevalent and costly, one in particular having cost the Commission $600 000 (Eisenberg 1993). This argument was enough to convince the Commission to begin a back care program which includes training in manual handling and a system of hazard identification, assessment and control.

OHS managers may need to do simple cost-benefit analyses where solutions cost money. One firm had recently had two back

injuries costing a total of $90 000. The problem was identified as hazardous lifting. The solution was to provide scissor lifters at a cost of $15 000 each. When the OHS manager set these costs alongside the potential savings higher management needed no convincing of the desirability of this expenditure. The OHS manager may even be able to point to productivity increases which such solutions can be expected to provide, as described in Chapter 5.

In giving talks to management it may be most useful to present compensation data as bar charts, line charts or in some other summary form, all on overhead transparencies. OHS officers in smaller firms may not have the facilities to process their workers compensation data in this way. It is worth noting that insurance companies will sometimes provide the data in this form free of charge. In most states and territories, even those with a government monopoly on workers compensation, firms deal with private insurers, functioning in some sense as agents of the government authority. These agents may not be in a position to compete on the rates they charge, but they are certainly in a position to compete in relation to services they offer their clients. Thus OHS officers or claims managers should ask these agents to present the data in ways which will be most useful to them, pointing out if necessary that other insurance firms do so.

Sometimes the abstract threat of a large common-law claim can be used to good effect. At one city hospital the OHS officer argued in a letter to management that an inappropriately placed speed hump might cause an elderly pedestrian to fall and suffer permanent injury. He noted that the consequence could be an expensive common-law claim. The hump was removed immediately. There is probably considerable scope for this kind of threat when carefully used.

OHS specialists should also seek to estimate the total costs of accidents and place these figures before management. Even very rough and ready methods can be effective. Schaapveld describes one general manager who

> thought the cost of an incident amounted to $800 000 because he had just signed the workers compensation cheque for that amount. When we were joined by the maintenance manager we were able to identify equipment damage totalling $5 000 000 without too much trouble. This did not even include the cost of loss of production due to downtime. (1993, p. 6)

An abattoir nurse I spoke with had a very sophisticated system for assessing total costs. Even though a knife cut may not involve

any time lost beyond the day on which the injury occurs, there is the cost of bandages and tape (possibly $45 dollars per injury) hours lost by the worker in having the matter attended to, the nurse's time taken in applying and changing dressings, and doctors' costs where stitching is needed. The nurse adds up these costs and is able to show management that four more sheep must be butchered to cover the cost of each additional knife injury, and this, even though there are no wage compensation costs involved. This is a particularly dramatic way to demonstrate to management the costs of injury and provides a good basis on which to mount cost-benefit arguments. This same nurse, as mentioned in Chapter 3, was able to cost a Q fever vaccination program, set this alongside the costs which could be expected from even a minor outbreak of Q fever and thus convince management of the cost-effectiveness of the program.

Finally, OHS specialists within a firm should be aware of whether the firm's clients or customers specify certain OHS requirements as a condition of doing business. The so called 'prequalification criteria' which large clients can now impose on construction firms are a good example (see Chapter 5). OHS managers can wield great influence within their own organisation by aligning themselves with these requirements and highlighting the fact that the firm may lose business if it does not comply. In some industries this may be one of the most powerful ways in which OHS specialists can draw management attention to questions of health and safety.

Reputation

Managers, like all of us, are very concerned about their reputations. This is the basis of a number of strategies which OHS specialists can use to get action. The aim is to find ways of comparing managers with their peers so that poor performers are shamed into improving their performance—and good performers can feel proud of their achievements.

It is quite striking that where managers are judged in terms of specified performance indicators they will expend considerable effort in improving their performance in these respects, no matter how irrelevant the measures might be to company profitability. In one company I looked at, 'number of days since the last lost-time injury' was an important performance indicator, and managers went to great lengths to ensure that the injuries which did occur did not result in any lost time. Keeping injured employees at work when

they are unable to perform any useful duties is hardly a rational policy from an economic point of view. But the company, a subsidiary of a multinational giant, was being compared by head office with other subsidiaries around the world in terms of this indicator. Thus managers' reputations were at stake if they did not perform well in this respect.

Wherever a health and safety manager has responsibility for a multidivisional company the opportunity exists to make such comparisons. Several OHS managers I interviewed said that they went to considerable efforts to make sure that divisional managers were aware of each other's performance. Where managers from different divisions sit around a table and scrutinise each other's compensation costs, lost-time accident rates and whatever other indicators can be made available to them, the good performers naturally feel a sense of pride and the poor performers silently resolve to do better in order to avoid this embarrassment when next they meet. One manager, the best performer in his group, told me that even he was vulnerable in this process. If his costs or accident rate suddenly increased, even though they remained below the level of his peers, this would be noticed and remarked upon. So although his performance indicators were already good he was highly motivated to ensure that they remained so.

There is a certain irrationality in all of this. Differences between divisions may well be mainly attributable to the different kinds of work they do. In the above case, the best performing manager's workers were machine minders while workers in the worst performing division were engaged in a great deal of manual handling and repetitive motion, both high risk activities. But, despite differences in activity, differences in injury rates tend to be attributed to management. A poor performance with respect to these indicators tends to be seen as a reflection of poor management. Whatever the truth of the matter, this is a perception which health and safety specialists can foster to great advantage.

OHS managers can also take advantage of meetings of divisional managers to present case studies of the circumstances in which particularly nasty injuries arise. These presentations should include dramatic photographs of the machine which may have caused the injury, showing why it was dangerous and how the danger could be eliminated. Managers will be anxious to know whether it was at a site under their control that the accident occurred, but the OHS manager may well decide not to identify the site. The manager concerned may recognise the photos and feel suitably though

privately ashamed, while other managers may feel uncertain about whether the incident occurred in their division and make a mental note to ensure that no such accident can occur in any facility under their control. Concern for reputation is really the driving force behind these reactions, even though the responsible manager may never be identified.

In a variant of this strategy, an OHS manager took photographs of a number of machines on various company sites which were being operated without their guards or in some other dangerous way. These photos were displayed on the walls of the meeting room and managers looked at each with great attention to see whether any of the machines might have been on a site under their control.

Another way to play on the concern for reputation is to draw management attention to 'industry standards'. As one hospital OHS officer explained, 'if every other hospital is doing it and we are not, this raises questions about the competence of our managers'. No manager wants to feel that he or she is out of step with what peers in the industry are doing, and OHS managers can use this information to gain management approval for what they want to do. The OHS officer explained how he had been given permission to form a committee to develop guidelines on the use of certain drugs because hospitals in all other states had such guidelines but hospitals in his state did not.

Likewise, in a chemical company I visited, advice from an industry-wide technical committee was influential with management for the simple reason that, if the firm was out of step with an industry standard, management would feel very vulnerable should anything go wrong.

Personal accountability

We have already noted that one of the strongest motives of senior managers is the desire to avoid personal liability; that is, the threat of personal prosecution. Another powerful motive is to improve their personal circumstances within a firm, in terms of both pay and position. Some of the most safety-conscious firms link the salaries of managers to their safety performance, and in some cases even careers are affected by safety performance. At Du Pont, for example, there is a clear understanding at all levels that failure to perform adequately in relation to health and safety will adversely affect careers. Managers have been moved sideways or even demoted for poor safety performance.

One safety-conscious company I visited had just had a major safety failure. It had always believed in management *responsibility* for safety, but this it turned out had not had the intended impact on the thinking of middle managers. Following the failure the company therefore adopted a policy of management *accountability*, which meant that managers' salaries and even careers would henceforth be affected by their safety performance. This, it was hoped, would lead to even higher standards of safety.

Safety officers and managers should promote systems of management accountability for safety within their firms. Perhaps the simplest strategy is to suggest to their chief executive officers that managers should receive a salary bonus for good safety performance. Since in many cases managers already receive bonuses for other aspects of their performance there is no reason in principle why chief executive officers should resist this suggestion. Just how good performance is measured is of course a critical issue.

One firm I studied provided a striking example of how *not* to implement this idea. The chief executive officer operated a bonus system of pay for his managers, with the bonus determined by how well the manager was doing what he or she was supposed to be doing. Line managers in this organisation were not presumed to have the job of managing safety and so their bonuses were not affected by their safety performance. The company did not have a health and safety manager but a risk manager, whose job was largely one of minimising compensation costs. His bonus was therefore determined by how well he performed in this respect. The chief executive officer asked him to try to get compensation costs down to 4 per cent of payroll, with the understanding that if he could his bonus would be increased. This is a thoroughly unsatisfactory approach from the point of view of health and safety. It is line managers who are in the best position to ensure safety; a risk or OHS manager can only advise. Thus the incentives were mistargeted. Furthermore, the best way for a risk manager to reduce costs is not to pursue safety but to concentrate on claims management. Thus the effect of the bonus on this risk manager was actually to divert attention from health and safety.

OHS indicators

The preceding analysis raises the question of just how safety performance is to be measured. Lost-time injury frequency rates are entirely unsatisfactory for at least three reasons. First, as has already

been amply demonstrated, they are far more sensitive to claims and injury management processes than to real changes in safety performance. Second, because in any particular workplace only a few such injuries may occur each year, variations from year to year will be statistically insignificant–that is, likely to be the result of chance fluctuations–and thus no guide to changing levels of safety. Third, they tell us nothing about how well the most serious safety hazards are being managed, as we saw in detail in the case of coal mines (Chapter 10). Copping (1993, p. 1) provides another telling example of the inadequacies of LTI-based statistics in this respect.

> After a run of nearly two years accident-free, a company employee slipped on a step and was unlucky enough to fracture a small bone in his foot. He was unable to work for several weeks and an LTI was recorded with a subsequent loss of safety awards to staff. At about the same time a container was dropped during an off-shore lifting operation. This latter incident had tremendous potential for injury but as luck would have it no-one was hurt. There is no doubt that the lifting incident was much more serious.

This passage not only demonstrates the inadequacies of LTI statistics but also highlights the negative consequences of using 'days since last lost-time injury' as an indicator of safety. The longer the period free of injury the greater the level of disappointment and frustration when a lost-time injury finally occurs, which statistically speaking is bound to happen. This can lead to a profound sense of demoralisation and a sense of injustice (why should one injury cause a loss of bonus when the commitment to safety has been so exemplary?). The result may well be a reduced commitment to health and safety.

These are the major reasons which have led various commentators to advocate that LTI rates be replaced by or at least supplemented with other indicators. Some measure of 'serious' injuries, for instance injuries resulting in long-term disability, or perhaps the use of fatality rates, would overcome the claims management and claims suppression problems. Such measures might provide useful indicators of safety changes in whole industries. But, because in any particular workplace serious injuries and fatalities are so uncommon, they would be even worse than LTI rates from the point of view of statistical significance and thus quite useless as tools for measuring changes in safety performance at particular workplaces. Statistics on dangerous occurrences or near misses suffer from similar problems.

Another possibility is to make use of statistics on the number

of incidents which require medical treatment but no time off work. Such incidents occur far more frequently than LTIs do and so are less subject to random fluctuations than are LTI rates. We saw in earlier chapters that occupational health nurses often keep records of medical treatments, and these can provide information to management about safety performance. In particular, these data can expose problems which may not otherwise come to light; for example, RSI among sewing machine operators (see Chapter 3). On the other hand, they give no indication about the potential for serious injury which may be present in the workplace.

A strategy which overcomes some of these problems is the use of *process* rather than *outcome* indicators; that is, indicators which measure safety-relevant processes rather than outcomes such as injury or fatality rates (Copping 1993). Process indicators will differ from workplace to workplace depending on just what processes are relevant. Moreover, they must measure things which occur with reasonable frequency so that variations have a chance of being statistically significant and hence indicators of real change in safety performance. For example, if in a certain workplace hoses left unrolled result occasionally in workers tripping, and on rare occasions in a lost-time injury, then counting the number of hoses left unrolled at any one time is likely to be a useful process indicator. If this count is repeated at randomly scheduled times trend data can be rapidly built up.

It is important to distinguish between two types of process indicator: those which focus on the behaviour of employees, and those which measure management activity. Consider, first, indicators of employee behaviour. Examples would include: the percentage of people wearing personal protective equipment, e.g. hearing protectors, at required times; the frequency with which danger tags are being used as required; and measures of good housekeeping, such as rolling up hoses. One of the best features of such indicators is that merely publicising the data within the workplace focuses attention on the problem and is likely to lead to safety improvements without the need for more direct or punitive management intervention. Moreover, the use of these indicators has the effect of involving people in the task of improving safety and creating a culture of safety. According to Whiting (1993, p. 45), such indicators have the following advantages:

- they are a sensitive indication of health and safety performance, enabling a workforce to detect whether safety is improving in a matter of weeks rather than months or years

- they are positive, focussing on how good rather than how poor safety is
- they are a direct measure of safety performance, focussing on how well personnel are complying with their own agreed safety responsibilities
- the results can be used as a powerful performance feedback
- they involve all workers and thus build 'ownership'

There is, however, a significant drawback to such indicators. They are focussed on and aimed at changing the behaviour of employees, not managers. Yet it is managers who are ultimately responsible for health and safety and who are in the best position to take action on such matters. Hence the importance of indicators which measure the safety-related activity of management. Examples here might be, depending on the circumstances: percentage of workforce which has received safety training; percentage of safety audits which have been completed on schedule. The general principle should be to have management specify its safety management plans and procedures and then to construct measures which assess how well these are being carried through in practice.

The process indicators discussed so far all focus on behaviour, either of employees or of management. There is widespread agreement, however, that the most effective way to deal with hazards is not by altering human behaviour but by redesigning machines and systems of work so as to eliminate the hazards. The real challenge, therefore, is to devise indicators of the extent to which a firm has succeeded in eliminating safety hazards in this way.

The various indicators discussed above all have their strengths and weaknesses, and OHS managers need to think carefully about the circumstances in which each may be most appropriate. In particular, none of these indicators by itself provides a basis for designing systems of bonus pay for managers, since none provides a comprehensive measure of what managers are doing to improve OHS. Probably the best way to make such an assessment is to employ outside consultants to give an overall evaluation of the performance of managers, using not only the kinds of measurable indicators discussed above but also more qualitative data on: how well safety is managed; the level of resources and attention devoted to OHS; the thoroughness with which accidents and dangerous occurrences are investigated; the willingness to redesign systems of work; the extent to which worker input is sought and responded to; and so on. Some safety consultants have quite complex systems for rating managers and one I interviewed produces a five-point

summary rating on managers ranging from A, the highest, to E, the lowest. One large company which employs the consulting firm in question told its divisional managers that they had to achieve a B rating within twelve months or face 'career decisions'. I was told that the employment of a group of managers was actually terminated for failing to meet this goal.

Support for OHS representatives and committees

A further strategy which OHS officers can usefully pursue is to support worker OHS representatives and joint committees, for example by resourcing them with information. OHS officers should ensure that joint committees are working effectively and that issues which they raise are dealt with and not shelved. Empowering the workforce in this way can have real OHS payoffs. One OHS officer I spoke with saw it as a major part of his job to set up, stimulate and service these committees throughout his organisation. This, he believed, was the most effective way to bring issues to light and get them resolved amicably.

Moreover, where worker representatives are backed by strong unions they may wield far more influence with management than the OHS officer does. Thus an OHS officer may on occasion be able to enlist the help of a worker representative in some common cause. Particularly where there is no specific regulatory requirement to fall back on, the threat of industrial action may be the only way in which management can be brought into line.

Seniority of OHS specialists

A final issue, over which OHS officers and managers have little or no control themselves, is nevertheless worth mentioning in this context. The more senior safety specialists are within an organisation the more effective they will be. Their impact will be maximised if they can talk regularly and easily to the chief executive officer. In relatively small firms safety specialists may have easy access to the chief executive, but in many of the larger firms I looked at health and safety managers did not have direct access to the chief executive but reported perhaps to a human resources manager. In one case the OHS manager was convinced that this was a deliberate strategy on the part of the chief executive officer to avoid being the recipient

of information which might make him personally liable. On the other hand, in one large organisation the OHS manager had an extraordinary degree of access to the top. He meets weekly with one of the four directors of the company and more often if he wishes. On top of this, there is a corporate Health, Safety and Environment committee, chaired by the managing director, made up of the four directors and the HS&E manager. This group meets quarterly and reviews all policy and performance. This is clearly a company where safety has a high priority.

In the case of the coal industry, many coal mines have a safety officer who reports to the mine manager but no higher. Companies which own several mines may not have an OHS manager at head office, with the result that there is no one at this point in the organisation with a special interest in OHS. There may be special circumstances in the coal industry which justify this structure, but in principle it is not in the best interests of OHS.

Conclusion

Safety specialists within organisations have a vital role to play in drawing management attention to questions of health and safety. There are many ways in which this can be done. The evidence of previous chapters suggests that one of the most effective is to invoke the fear of personal liability, where appropriate. Ensuring that senior managers' own personal fortunes within the company are in some way linked with their health and safety performance is also an effective way to gain management attention. Health and safety specialists should also find ways in which to play on the concerns of top managers for their own reputations, in particular by comparing them with their peers. They may also at times be able to use the argument that safety is profitable, either in relation to compensation costs or in some other way. Much of this activity depends on the collection of relevant information which can be used to assess performance. Information is powerful, but its effect is not automatic. It is only effective when it is organised and presented to managers in such a way as to play on their various motives. Hence the importance of the OHS specialist.

12

Strategies for governments and OHS authorities

In Chapter 11 we looked at what safety specialists within firms can do to direct the attention of their managements to occupational health and safety. In this chapter we look at what governments and their health and safety authorities or agencies can do. This will be by no means a complete account. The purpose is simply to draw together some of the implications which emerge from the present research. In addition, I shall draw on a series of interviews conducted with senior executives of OHS agencies in Australia in 1992 (Hopkins 1993b).

Making compensation costs more effective

Two points emerge from our analysis about ways of making compensation costs more effective as incentives. First, as we noted in earlier chapters, unless compensation costs are distributed to the lowest budget or profit centres within a large organisation on the basis of the actual claims experience in each area, they cannot function as an incentive to managers at this level to attend to questions of OHS. In Chapter 11 it was argued that OHS managers within large companies have a role to play in setting up the appropriate accounting systems. But governments, too, can promote such systems. In some circumstances governments may be able to require them. In the case of self-insurers, for example, appropriate accounting systems could be specified as a requirement of the self-insurer's licence. It is important to recognise that the first effect

of such systems will be improved claims/injury management. But in the long run they can be expected to yield health and safety payoffs as well.

A second point concerns the way in which premiums are paid. It is important not only that premiums reflect claims experience but that senior managers are aware of this and aware of just how much their claims are costing them. This requires that payments be made as *dramatically* as possible. One way in which this can be done is if the compensation authority conceptualises payments in terms of bonuses and penalties rather than as experience-based premiums. The point is that describing the payment as an experience-based premium tends to minimise its dramatic impact and to present it as just another business cost. On the other hand, if enterprises are charged an initial premium based on their industry classification and then paid a 'bonus' or charged a 'penalty' at the end of the year to bring their payment into line with the actual claims experience, even though the financial effect may be just the same, the psychological impact will be different. Such payments should be transacted with the maximum publicity, with accompanying letters to chief executive officers, either congratulating them on their bonus or chiding them for the below average performance for which they have been penalised. Compensation authorities could even have a program of making bonus payments in person to selected chief executive officers. Such strategies are likely to maximise the impact of these financial incentives on management and strengthen the hand of OHS specialists within organisations when making arguments based on compensation costs.

Data-driven targeting

It was shown in Chapter 6 that the inspection and enforcement activities of prevention agencies have a substantial impact in improving safety. One central issue which the agencies face is how to make best use of their scarce resources in carrying out these activities; that is, how best to target or prioritise their inspection and enforcement work. Most agencies give a high priority to investigating fatalities and serious injuries, as well as targeting dangerous occurrences and known hazards. But beyond this the challenge is to devise programs for the systematic targeting of high risk enterprises and industries. This requires the collection of data. The most comprehensive risk data available are collected by the compensation authorities and

many prevention agencies in Australia therefore make some use of these data in planning their inspection programs.

We have already noted how, within individual enterprises, lost-time injury claims data are not a reliable indicator of safety. The aggregate data collected by compensation authorities are even more problematic from this point of view. If we assume that the aim of a prevention agency is to minimise death, serious injury and long-term disablement, then a focus on LTI claims data will not be helpful. By way of illustration, LTI rates and compensation costs on offshore oil platforms are low, but the potential for disaster is high, as demonstrated by the Piper Alpha disaster in the North Sea in 1987 in which 167 people died. A prevention authority should therefore target such installations despite the negligible numbers of claims which they may generate on an annual basis.

On the other hand, compensation authorities are concerned to reduce compensation costs and it is appropriate that they make use of compensation data to target high cost industries or employers. Furthermore, the most sensible strategy for a compensation authority seeking to reduce costs is to encourage better rehabilitation, earlier return to work and tighter claims management. From the point of view of a compensation authority, injury prevention is a relatively inefficient way to reduce the cost of compensation. In short, the role of a compensation authority is quite different from that of a prevention agency. While the former properly focuses on reducing compensation costs and LTIs, the latter must focus on hazard control. In some cases the two may coincide. For instance, RSI remains a major hazard for office workers and at least in the case of federal government employees is generating substantial numbers of claims. But, since major hazards often fail to generate compensation costs on a routine basis, compensation and prevention agencies will or should find themselves targeting very different problems. This is particularly clear in the case of the coal industry in New South Wales, where the coal mines inspectorate focuses on major hazards such as explosions, roof falls and outbursts which, because they are unusual, generate relatively few claims, while the body responsible for compensation, the Joint Coal Board, seeks to reduce compensation costs and the number of routine lost-time injuries by stressing claims and injury management (see Chapter 10).

If it is inappropriate for a prevention agency to use compensation data for targeting purposes, what data should it be using? Many such agencies operate reporting systems—quite independently of the compensation process—which require employers to notify them

of serious injuries and incidents. There is, of course, substantial underreporting of such matters which makes frequency rates based on such data entirely suspect. Nevertheless, these reports serve to alert the authorities to the existence of hazards which may need their special attention. For example, if a number of reports concern the use of forklift trucks inspectorates can target this problem in various ways, perhaps with a campaign of driver education or by requiring new safety features on the vehicles. Or if a particular industry shows a rapid rise in notifiable accidents it can be targeted for investigation, as was the cotton industry in New South Wales (see Chapter 6). Thus, despite their limitations, such data bases are worth maintaining.

Beyond this there are other data sources which prevention agencies are or should be developing. Surprisingly, by no means all fatalities occurring on the job are reported to prevention agencies. In New South Wales in 1984 more than half of all deaths resulting from traumatic injury on the job (71 out of a total of 129) were not reported to the OHS authorities. In particular, none of the 36 truck driver deaths was notified and only 50 per cent of farm deaths were notified (Hopkins et al. 1992, p. 149). Prevention authorities need to have systematic access to coroners' records to identify the on-the-job fatalities which they currently miss.

The inadequacy of data on rural workers has led some prevention agencies to develop new sources to overcome this problem. The Queensland OHS agency, for example, has set up a data collection system covering rural GPs and hospitals to record every *treated* work-related injury.

Again, work-related cancer deaths go almost completely unreported to compensation authorities, OHS agencies or coroners. In response to this problem some OHS agencies have sought to develop links with local cancer registries.

The South Australian OHS authority worked with the state's Health Commission to get occupation recorded on hospital admission and discharge records in order that these data might be used to detect work-related health problems. Another South Australian project concerns the Port Adelaide Community Health Service. There are about 40 GPs in the area and the project aim is to get them to take work histories from their patients. Since Port Adelaide people tend to live and work in the same area, health problems which are occurring at a particular worksite are likely to show up in this way when the data are collated. Inspectors are then in a position to go to a local cement manufacturer, for example, where a number of

workers may have suffered from dust problems, and discuss with management ways in which the situation might be rectified.

The Port Adelaide project is an example of what is known in the literature as the *sentinel health event* approach (Wegman and Froines 1985; Rutstein et al. 1983). A significant illness pattern is identified which is suggestive of a specific problem which can then be acted on immediately. The point is that warning signs may be available long before the epidemiological evidence is in and long before the problem shows up, if it ever does, in compensation statistics. An authority which is alert to these signs is thus able to take preventive action before too much damage is done.

The Queensland OHS agency is also alert to sentinel health events. Here are some examples. First, an individual who was diagnosed as having an abnormal liver function told his doctor he was working with manganese steel. The doctor thought there could be a connection. The man notified his union which contacted the OHS agency. The agency decided to monitor the blood manganese levels of all the workers involved and to carry out further research on the connection.

Second, the agency embarked on a campaign to explain to banana farmers how to handle pesticides. This was given a high priority after doctors in a banana-growing area contacted the agency to notify it that two or three insecticide poisonings were being dealt with each week in local hospitals.

Third, the agency does annual tests of all workers exposed to MOCA, a chemical used in the plastics industry which is suspected to be a cause of bladder cancer. Wherever cases are found with high levels of MOCA, management is asked to change work practices. The agency has recently completed a study of the use of MOCA in ten Brisbane factories and has decided to recommend a maximum allowable urine concentration of 20 micrograms per litre—one-fifth of the US recommended standard (OH Newsletter 285, p. 5).

To return specifically to the question of targeting, perhaps one of the most systematic attempts to target on the basis of risk rather than of compensation data is in use in Britain. Companies are assessed under four headings. Points are allocated and a weighted sum computed which gives a rough and ready indication of risk. High-scoring companies are then inspected with the greatest frequency. A firm whose management is rated excellent in its safety systems may nevertheless score high if other risk factors warrant it. For example, a major chemical works will be subject to regular inspection even

though its management systems may be first class, simply because the consequences of an explosion, should one ever occur, could be catastrophic. The agency puts in multidisciplinary teams of inspectors to analyse, not simply the risks, but also the systems which the firm has in place to control those risks (Linehan 1992).

There are two other considerations which inspectorates need to take into account in planning their routine inspections. The first is that it is in some respects most efficient to focus on large employers and to ensure the adequacy of their health and safety systems. Where such employers improve their OHS management, large numbers of workers benefit. Second, small employers are the ones who are least likely to be aware of their OHS obligations and least influenced by arguments put in terms of economic self-interest. A visit by an inspector is almost the only way to get to small employers. Moreover, such a visit is likely to be relatively effective since small employers are more impressed than are many larger employers by the authority wielded by government inspectors, provided, of course, that inspectors take a firm line whenever they encounter resistance or non-cooperation. Unfortunately, these two considerations pull in opposite directions and just what weight inspectorates should give them will depend on circumstances.

To summarise this section, it is not appropriate for a prevention agency to target its activities using compensation data. Such agencies must develop their own priorities, based on an independent assessment of the hazards. Moreover, they must actively construct their own data sources in order to identify health and safety problems not otherwise apparent. This is particularly important for occupational health issues which tend not to show up in compensation data.

The amalgamation of compensation and prevention agencies?

The preceding discussion has implications for the way in which compensation and prevention agencies are organised. Workers compensation and OHS were treated in Australia until very recently as largely unrelated concerns, administered by quite separate agencies. OHS legislation was administered in most states by an industrial inspectorate located in a department of labour or industrial relations, while compensation legislation was normally administered by a compensation board, not part of any such department.

Since the late 1980s this situation has changed: there is now a

widespread view that the functions are complementary and that each has something to contribute to the other. The result is that the administrations of these two areas of government activity have been integrated to varying degrees in jurisdictions around Australia. The question which has confronted governments is: what degree of integration is most appropriate? In almost all cases there are now arrangements for the coordination of activities. In particular, we may note the funding of some or all of the activity of the prevention agencies from compensation levies, the sharing of computer facilities and the sharing of data. In some states, for a period, the chair of the OHS authority was made the chair of the compensation authority, and in some jurisdictions the prevention and compensation functions have been merged in a single body.

The principal advantage for OHS which is said to flow from this integration is that it enables prevention agencies to make greater use of compensation data for targeting their activities. But, as was made clear in the previous section, this is no advantage. In fact any prevention agency which uses compensation data to determine its priorities is seriously at risk of misdirecting its resources.

Furthermore, because the aims of compensation and prevention agencies are not the same, the danger is that a merger of the two will result in prevention being swamped by the 'bottom line' of compensation costs. In most Australian jurisdictions government compensation authorities are responsible for the insurance funds, and all parties—business, unions and government—have a strong interest in how this money is managed. Moreover, compensation agencies are far more accountable for their financial performance than OHS authorities are for the level of industrial accidents. Thus compensation concerns are likely to take priority over those of prevention whenever a choice between the two has to be made. Putting all this another way, the danger is that in any merged organisation the inspectorate may in the long term find itself harnessed to the task of reducing compensation costs rather than controlling hazards. Such an inspectorate would have no incentive to develop the alternative sources of information discussed in the preceding section, particularly in relation to health matters.

In three states, where the chair of the compensation commission is or was for a time the chair of the prevention agency as well, all three commented on this problem during the course of this research. They noted that there is a 'prevention culture' which permeates OHS agencies, and a 'compensation culture' focussed on good financial management which prevails in compensation commissions.

Furthermore, although initially appointed to their positions for their OHS expertise or interests they noted that, when chairing the compensation boards, they were confronted by a logic which made the financial concerns of compensation authorities irresistible. Thus, all three expressed reservations about total merger.

The above discussion makes it clear that there is a fundamental conflict of interest between compensation and prevention agencies. It is worth developing this point a little further. Consider the question of whose side an agency is on in the final analysis, particularly when a worker sues an employer for negligence. In general, the insurer stands behind the employer in such circumstances and indemnifies the company against damages. On the other hand, the injury may have resulted from a violation of some safety regulation, in which case a prevention agency may be seeking to prosecute the company. Prevention and compensation are thus at loggerheads. Prevention personnel may demand information from the company for use in a case against it, while the compensation agency will have an interest in suppressing any information which might demonstrate company negligence. In any merged organisation there is thus the potential for a tussle over ownership of information. There is also the possibility, in theory, that where very large damages are at stake a board orientated to the protection of the fund might bring some pressure to bear on the prosecutorial arm of the agency not to proceed. There may, of course, be organisational ways of protecting the prosecutorial division against such pressure, but the risk remains in any merged organisation that subtle ways will be found to bring such pressure to bear.

Another area where this conflict emerges is where there is some dispute about whether a condition is work-induced. RSI was a classic case. The problem came to light in the early 1980s, and by the middle 1980s insurers were going to considerable efforts in many cases to deny liability on the grounds that the condition was not work-induced (Hopkins 1989b). Prevention-oriented authorities, however, proceeded on the assumption that it was. Thus Worksafe produced guidelines in 1987 for the control of RSI. In Queensland, the prevention agency at one stage gave evidence that keyboard work was the cause of RSI, in a court case in which the compensation board was trying to deny liability. How a merged authority would have dealt with the conflict of interest is hard to say.

In short, there are good reasons for maintaining the organisational distinction between prevention and compensation. The purposes of compensation and prevention are different and at times in conflict

and too close an association between the two is likely to be detrimental to OHS.

Commercialisation

There is one particularly undesirable outcome of amalgamation which has yet to be addressed. Compensation authorities which are responsible for large amounts of money must be run on the basis of commercial principles, with income from premiums and other sources at least equal to expenditure. Where a prevention agency becomes part of such an enterprise there is pressure for it, too, to be run along commercial lines and required to pay its way as far as possible, by charging fees for the 'services' it provides to employers.

But fee-for-service involves a reordering of agency priorities: a blurring of the focus on worker safety and a sharpening of the focus on the needs of fee-paying business clients. Insofar as this happens the agency's role in ensuring compliance is compromised; decisions about how to deploy the agency's regulatory resources may be made on the basis of their financial payoff rather than their safety payoff.

To be quite specific, consider the case of the Londonderry Occupational Safety Centre, a major government testing and research laboratory in Sydney. The Centre, along with other OHS programs and services, was transferred to WorkCover in 1989 when the prevention and compensation agencies in New South Wales were merged. The board of the new WorkCover took the view that Londonderry was an asset which was not producing a return. In fact it was costing $1.5 million dollars a month. Londonderry has now been largely commercialised and is actively promoting its testing services to industry under its commercial name, TechSource. The revenue raised by TechSource has gone from a little over half a million dollars in 1989–90 to over $3 million in 1991–92 (Annual Report 1992, p. 45). On the basis of the WorkCover annual report for 1992, revenue raised would now appear to be the primary performance indicator for the Londonderry Centre. From an OHS point of view, however, Londonderry's performance should be evaluated by its contribution to occupational health and safety, difficult though that may be to assess, rather than by the revenue it generates.

It is instructive to note that the principle of commercialisation is the root cause of the woes experienced by the federal government's Civil Aviation Authority (CAA). The Authority was

responsible for the regulation of air safety, among other things, yet it was set up as a Government Business Enterprise and expected to recover its costs, as far as possible. One consequence of this was the partial deregulation of air safety, with the CAA throwing responsibility back onto aircraft operators, in particular in relation to airworthiness inspections. This gave rise to enormous concern within the aviation community about the willingness of the CAA to police safety standards and about a perceived decline in safety (Department of Transport and Communication, Report of the Aviation Safety Regulation Forum, 1992, p. 14–16; Aubury, *The Canberra Times*, 7 January 1993, p. 9). In particular, the crash of a passenger aircraft near Young in New South Wales in 1993, in which seven people died was blamed on the commercialisation of the CAA. The federal Opposition spokesman on transport said in parliament that the accident occurred because the CAA was allowing 'shonky' operators to fly. The aircraft should have been grounded, he said, but 'a culture' operating within the CAA meant that people's safety was being placed second to the commercial interests of the air operators (*The Canberra Times*, 4 May 1994). A Bureau of Air Safety Investigation report made the same point in more measured terms: 'The activities of the safety division [of the CAA] appeared to be biased towards promoting the viability of the operator rather than promoting safety' (BASI Report No. 9301743, 1994, p. 54). In response to this and other developments the Minister eventually decided to remove the safety division from the CAA and reconstitute it as an independent agency, the Aviation Safety Authority, fully funded from the government budget. In doing so he explicitly acknowledged that the CAA's problems stemmed from the twin policies of deregulation and user pays–that is, fee-for-service (*The Canberra Times*, 15 October 1994).

The commercialisation which has occurred in some OHS agencies in Australia has not generated the level of concern evident in the aviation case, perhaps because most workplace accidents do not have the potential to kill large numbers of people, as do aircraft accidents. But in principle such developments threaten the integrity of an OHS agency, just as they did the CAA.

Making prosecutions more effective

In Chapter 6 we noted that prosecution following a workplace death or injury was an important part of the regulatory arsenal. Such

prosecutions can have a significant impact on those prosecuted, as well as on all those who are potentially liable. Moreover, they enhance the credibility of inspectorates: the knowledge that inspectors can initiate proceedings provides an incentive to comply with regulatory requirements and to cooperate with inspectors when they give advice. A number of ways in which these prosecutions can be made more effective were discussed in Chapter 7; let us recall the most important of those suggestions here.

First, top managers are often very concerned about possible adverse publicity flowing from prosecutions. Regulatory agencies should take every opportunity to publicise the names of offending companies and to describe the culpability involved so that no one can harbour the illusion that violations are simply technical breaches or that injuries and deaths are unavoidable accidents.

Second, prosecutions can be regarded as having a significant impact if organisations respond by making fundamental changes in the way safety is managed. These changes should be company-wide and not confined to the particular circumstances of the offence. Thus, for example, replacing a guard on an unguarded machine is not enough. At the very least, the company should audit all its machines regularly to ensure that all guards are properly installed. If, at the time of the prosecution, the company cannot report that such changes have been made, or are in the process of being made, the court should impose some form of organisational probation or rehabilitation order on the company to achieve this end.

Third, prosecutions of companies are likely to have a greater impact if the prosecutors can find ways of getting senior managers into court. The unpleasantness of this experience is likely to focus the minds of senior management on the problem and provide a real and very personal incentive to avoid repeat occurrences. At present many companies plead guilty and thus avoid the need to have their top managers cross-examined on the witness stand. Prosecutors should consider the possibility of issuing subpoenas to chief executive officers or managing directors to present evidence in relation to penalty. In particular, these people should be asked to describe what company-wide changes have been made to prevent a recurrence. They will be severely embarrassed if they have to admit that the company has failed to make any such changes.

Fourth, top managers are most concerned about personal liability under the various OHS statutes; that is, the possibility that they may be personally prosecuted. Unfortunately, the legislation as currently written makes it difficult to pin liability on managers unless

they have some direct knowledge of the circumstances. Nevertheless, it would be good policy for the regulatory agencies to place a high priority on finding cases where directors of reasonably large companies can be prosecuted. Such prosecutions would send shudders through every boardroom in Australia. Even in the absence of such cases regulatory agencies could well take a leaf out of the book of the management consultants and publicise the theoretical possibility of individual prosecution more than they do.

Fifth, the Australian legislation needs to be rewritten so that directors and top managers are clearly personally liable unless they take active steps to promote health and safety within their organisations; that is, unless they exercise 'due diligence'. The Queensland legislation provides a model in this respect.

Sixth, thought needs to be given to reforming the law to allow manslaughter charges against corporations to be brought more easily. Highly publicised manslaughter trials are likely to have a greater deterrent effect on both the company prosecuted and on other companies than are prosecutions for breaches of some section of an OHS Act.

Empowering OHS practitioners

It was argued in Chapter 11 that OHS practitioners within larger organisations have a role to play in bringing health and safety to the attention of top management. There are various ways in which governments can strengthen this leverage.

Not all organisations have on their staff someone with a special responsibility for OHS. In Queensland, legislation now requires certain employers to have a health and safety officer. The legislation also requires that this officer undergo OHS training. This is a model which could usefully be pursued in other states. One problem with the model is that OHS officers need not devote themselves full-time to this job. In one company I visited the employer had simply appointed the personnel manager as OHS officer. The officer told me that he in fact spends a negligible amount of time on OHS. However, other firms I visited in Queensland had responded to the legislation by appointing full-time officers. Thus, although the legislative requirement to appoint an OHS officer does not guarantee that such a person will function as intended, it increases the likelihood that senior managers will have their attention drawn to OHS matters.

Governments need also to consider ways of enhancing the impact of OHS officers or managers. One way in which this might be done is to require that they report in person to the chief executive officer of an organisation, and to its board, on a regular basis. An appearance in person can be expected to maximise the potential impact of such a reporting process. OHS agencies might consider drawing up guidelines about what the reports might contain. Information about company safety performance would be an obvious inclusion, but the reports might also perform an educational function by drawing attention to recent prosecutions and other OHS developments.

Governments should also legislate to require employers above a certain size to have their workforces choose OHS representatives. These representatives should have legally prescribed powers. The evidence is that worker representatives perform a useful role in certain circumstances and are more effective in gaining management attention than joint worker/management committees are.

Finally, government agencies should maintain their emphasis on the provision, to all those with an interest, of high quality information concerning hazardous substances. It is not enough that employers be charged with the responsibility of providing this information as it may be incomplete in vital respects—as in the formaldehyde case discussed in Chapter 8. Governments must ensure that the information being made available is complete. The provision of such information to OHS officers, worker representatives and other safety practitioners within organisations empowers them to take more effective action in relation to hazardous substances.

Conclusion

Governments and their OHS agencies have devoted a good deal of energy to reforming their systems of regulation, for example by developing codes of practice which have the approval of all parties concerned and by achieving uniformity of regulation across all Australian jurisdictions. While this focus on getting the regulations right may pay dividends in a number of ways, the approach taken in this book is that the most important challenge for the authorities is not to get the regulations right but to find ways to get management's attention focussed on questions of health and safety. Unless this is done health and safety performance will not improve, no matter how good the regulations.

Exploring with managers just what it is that does attract their attention suggests a number of things which governments can do to help in this respect. Given that so much reliance is now placed on the incentive effects of workers compensation premiums, governments must ensure that these incentives are properly targeted and that managers are made aware of them. They must recognise, too, that workers compensation statistics are a poor basis on which to prioritise their own OHS interventions, and they must avoid being sidetracked by the legitimate concern of compensation agencies to reduce the costs of compensation. There is also a need to enhance the impact of prosecutions and, in particular, to emphasise the personal liability of directors and senior managers. The threat of personal liability is probably the single most important way of impacting on senior management, yet it is one which governments have not on the whole exploited. Finally, governments must find ways of creating, empowering and resourcing OHS practitioners within large organisations. It is these people who are in the best position to gain the ear of management on a regular basis.

This is clearly a very incomplete listing of things which governments can do. It is simply a list of strategies which emerges from this research. Equally clearly, these strategies have the potential to improve significantly the OHS performance of Australian employers.

13

Concluding comments

The central question raised in this book is: what is it that gets management's attention focussed on matters of occupational health and safety? Disaster and associated bad publicity will do so very effectively and quite independently of anything which the authorities might do. Explosions and fires at chemical plants and major construction collapses can all cause enormous economic damage together with adverse publicity which itself may have an adverse economic effect on the company concerned. Occidental, the company which operated the ill-fated Piper Alpha platform, subsequently ceased operations in the North Sea; Union Carbide, to give another example, is a much smaller corporate entity than it was prior to the Bhopal tragedy in India in which thousands of people died as a result of an uncontrolled release of poisonous gas. Likewise, health scares, particularly those involving the threat of cancer or radiation, can generate substantial adverse publicity which focuses the minds of management wonderfully. Even if there is no threat to life the possibility of an environmental disaster, such as was caused when the oil tanker *Exxon Valdez* ran aground in Alaska, has the same potential to focus company attention on questions of safety. Furthermore, all such events are damaging to the reputations and careers of individual managers. In industries where disastrous events are possible the fear that they may occur provides a powerful incentive to ensure that health and safety are given a high priority.

A note on the safety leader phenomenon

The possibility of disasters on the scale just described has given rise to what I shall call the safety leader phenomenon. Safety leaders are companies, found primarily in the chemical and oil industries, whose commitment to safety is exemplary and whose safety practices and performance are almost legendary. Companies such as Du Pont and Shell are often cited in OHS circles as safety leaders in this sense—as examples of what is possible and how the very best health and safety performance can be achieved. In what follows we will consider the extent to which they can legitimately serve as models and will identify some lessons which can be learnt from their experience.

The outstanding feature of the approach taken by safety leaders is the fact that the commitment to safety comes from the top. The managing director of Du Pont Australia reads accounts of every lost-time accident occurring in a Du Pont facility anywhere in the world. These accounts can be brought up on a computer screen on his desk at a moment's notice. In an interview I had he was able to tell me of the company's most recent LTI which had occurred somewhere in Africa. Senior management in Australia, he said, must report every lost-time accident to head office in the United States within 24 hours and explain what is being done to prevent a recurrence.

In the case of Shell Australia, one third of every board meeting is devoted to safety. Safety is always the first item on the agenda, and at each meeting the board generally discusses two or three particular LTIs and hears from the managers concerned about the circumstances. In the case of a fatality, the chief executive officer of Shell Australia must travel to The Hague to make a presentation to the parent company about the circumstances and the action taken to prevent a recurrence. It is clear that the attention of top management in these firms is well and truly fixated on OHS and that this is a critical factor explaining their superior safety performance.

A second aspect of the approach taken by safety leaders is the stress on developing a culture of safety. But while it is clearly important to develop the appropriate attitudes among employees, this can easily degenerate into blaming the victim. Here are the words of a senior manager of one safety leader whom I interviewed.

> Both government safety organisations and unions are quite simplistic on safety. They focus on equipment, not on the acts of people. In our experience, 95 per cent of accidents occur because of the acts of

people. They do something they're not supposed to do and are trained not to do, but they do it anyway. Changing this behaviour is much harder than focussing on equipment. When you've done the technical things, you've only just started. That's just the tip of the iceberg of safety management.

But, as pointed out in Chapter 1, to claim that a certain proportion of accidents are caused by people is unenlightening. Accidents often involve both an immediate human error and a variety of engineering and system precursors. Furthermore, it is often more effective to make technical changes which will prevent accidents occurring than it is to exhort workers to behave properly. Insofar as the stress which safety leaders place on culture involves holding workers responsible for the injuries which occur to them, it is not an approach worthy of emulation.

However, the culture of safety can also contribute to management's commitment to safety. The managing director of Du Pont Australia told me how, early in his managerial career, he spent an initial twelve years with Du Pont, during which time he was thoroughly 'indoctrinated' (his word) with the Du Pont safety culture. He then went to another company which he discovered was not so committed to safety. He tried but failed to get this changed. Eventually he left, in part because of his concern about the way the company was hurting its people. Insofar as the culture of safety serves to keep management focussed on OHS, it is clearly a desirable phenomenon.

There is one other feature of the behaviour of safety leaders which is problematic—their drive to achieve a zero lost-time injury frequency rate (see Chapter 3). There are several points to be made about this obsession, as it undoubtedly is. First, the industries concerned are very high-tech and there is relatively little manual handling work involved—relative to many other industries, that is. For this reason they tend to experience relatively few lost-time injuries. The zero LTI target is thus more readily achievable for these industries than it is for most. Second, the emphasis on achieving a zero LTIFR can lead to perverse outcomes at times, such as keeping people at work who might be better off at home recuperating. Third, the focus on minimising routine LTIs may distract attention from the need to control serious hazards. For instance, one safety leader with an enviable LTI record has had two fires in recent years on offshore oil platforms. One resulted in a death and the other in a serious injury. The fire control system failed in both cases, in similar ways. Ensuring that the fire control system is fully functional at all times

is clearly a top priority on such platforms, yet it is a matter which can easily be overlooked in the drive to achieve a zero LTIFR.

Thus, while the commitment of top management is exemplary in these firms, there are other respects in which it may be neither desirable nor even possible to translate the experience of the safety leaders into other industrial contexts. Perhaps the major limitation on the generalisability of their experience is the fact that it is the fear of disaster which drives their safety commitment. A similar level of commitment cannot be expected in industries where similar disasters are not possible.

Gaining management attention: a summary

Where disasters of the kind discussed above are not a possibility, it is up to governments to find ways of making health and safety salient in the minds of managers. This book has dealt at length with the pros and cons of several of these approaches. It is convenient to summarise them at this point.

In terms of generating economic pressures, governments can organise workers compensation costs so that employers have a vested interest in safety. And they can point out to employers that safety pays, not only in terms of reduced compensation costs but also in terms of the overall costs of accidents and injury, the enhanced productivity which can sometimes be shown to flow from health and safety initiatives, and the competitive advantage which good health and safety may sometimes give them.

There are a number of weaknesses inherent in this approach which have been highlighted in this study. First, safety does not always pay; there are many circumstances where it is profitable to run risks. Second, compensation costs do not necessarily motivate employers to improve their health and safety performance. Such costs are most easily reduced by improving claims and injury management. The rational employer will focus first on these strategies and may do nothing in the first instance about safety. Third, in some industries, for example the rag trade, the construction industry and the cleaning industry, where employment is insecure, employees may not make compensation claims, for fear of being sacked. This is particularly likely to be the case where workers are non-unionised, non-English-speaking and/or female. Fourth, in industries where work is done on a contract basis, workers compensation premiums do not provide safety incentives as far as the

principal contractor is concerned. Fifth, occupational illnesses tend not to generate compensation claims, and so employers are under no economic pressure to take action. Further circumstances in which compensation costs are incapable of generating safety incentives are discussed in Chapters 3 and 4. For all these reasons economic incentives, though they have a part to play, cannot be relied upon to focus management attention effectively on OHS performance.

A second factor which can sometimes very effectively engage the attention of management is an inspectorate. The evidence is that where inspections result in legal orders or the imposition of penalties, no matter how modest, the shock effect is enough to get managers to take notice and to take steps to improve their performance. It is also the case that intensive inspections, such as those involved in the safety management audits carried out by some inspectorates, are an effective strategy. Finally, inspections are probably the only way in which small employers get any message about OHS.

The possibility that in the event of a fatality or serious injury the inspectorate might prosecute is also an important source of leverage on management. The fact that such a prosecution might be aimed at them personally is a particularly potent threat. Time and again managers whom I interviewed said that the fear of personal liability was the most important motivator for them to take OHS seriously. Unfortunately, the prosecutions being launched are not achieving their full potential in this respect; ways in which this might be remedied were suggested in Chapter 7. It is important that this potential be realised: while governments cannot hope to construct economic consequences of the type which follow a major disaster, in order to get management to take OHS seriously they can devise prosecution policies with the capacity to generate personal consequences for managers (in terms of bad publicity and shame) comparable to those which result from a major disaster. If this potential can be achieved, the safety awareness which is found in industries where disasters are possible might be stimulated in other contexts as well.

A further factor which can draw management attention to OHS is the activity of employees themselves. Strike action can sometimes impose major economic costs on companies. Worker health and safety representatives, when well resourced and trained, are also effective, particularly when they can draw the attention of managers to breaches of the regulations and point out to them that in the event of injury they (the managers) will be personally liable.

Finally, company OHS officers have an important role in bringing the economic and legal consequences of inadequate OHS performance to the attention of managers in ways that motivate them to do better.

The primacy of the legal threat: proof of the pudding

My interviews suggested that, of all the sources of leverage described above, the threat of personal liability is the most potent. Interestingly, risk management consultants behave in ways which confirm this view. Let me describe a procedure used by one of the largest such firms in Australia to win new clients. They first chose a target industrial area. Then, driving the length of every street in the area, they identified all the significant business establishments. Next they researched these establishments and ascertained the name of the senior manager on the site and the name of someone who might be expected to have some responsibility for OHS—an OHS manager or a human resources manager. These individuals were invited to a meeting. About 120 companies were contacted in this way and about 50 people attended the meeting. The risk management consultants arranged to have two speakers address the meeting—both solicitors—one to speak on legal obligations under OHS legislation and the other on legal obligations under environmental law. Both speakers emphasised personal liability. In short, the sales pitch to these managers concerned the possibility of prosecution to which poor OHS practices exposed them, rather than the savings to be made from good OHS practices. The consultant firm then offered its services in helping managements to meet their legal obligations. The judgement of this firm—and its livelihood depends on this judgement—is that the legal argument is more effective than the cost savings argument as a way of attracting new business.

A further example of this thinking can be found in the advertising of the National Safety Council of Australia, in effect a firm of risk management consultants. An advertisement for its 5-star safety management system reads as follows (*Financial Review*, 16 March 1994):

Open Letter to Board Directors and Chief Executive Officers

DUE DILIGENCE

> Are any of your business operations vulnerable to major damaging events? Can you and your fellow Directors demonstrate that you are exercising 'due diligence' in managing such risks?
>
> Nearly all laws now include similar words to describe Directors' responsibilities. The best defence against actions is to be able to show that you and your Board members are pro-actively diligent in doing all that is reasonably practicable in assigning responsibilities and resources and monitoring performance very closely.

The advertisement goes on to extol the 5-star system and then says:

> *As a concluding consideration* [emphasis added] . . . large economic gains have been made in Australia by organisations willing to install practical and effective [safety] systems . . .
>
> The NSCA 5-star system provides a framework to demonstrate your due diligence requirement, as well as offering an integrated benchmarking system designed to improve your bottom line.

Here, again, a major risk management consulting organisation, in advertising for business, seeks to gain management attention by emphasising the legal consequences of safety failures ahead of the economic consequences. If organisations whose very life depends on it make this judgement about what gets to senior managers, government authorities should obviously take note.

A process perspective

The preceding discussion should not be read as implying that the fear of prosecution *always* provides the greatest leverage. The principal levers will vary with the circumstances. One way to demonstrate this is to examine the behaviour of an organisation over time in order to see the interplay of influences. Let us consider, from this point of view, the experience of one large organisation, a university. We will see in this case that there is actually a process at work tending to make the university increasingly conscious of OHS over time.

Prior to the RSI epidemic of the 1980s the university had no OHS policy and no OHS specialist on campus. This changed following the rapid rise in the number of compensation claims for RSI among secretarial staff in the early 1980s. Senior management was of course concerned about the human costs involved, but it was the financial cost which attracted their particular attention. It was clear on analysis that the epidemic could not be stemmed merely

by better claims/injury management and that the university had to turn its mind to preventing these injuries in the first place. One response was to set up an OHS unit, headed initially by an ergonomist/occupational therapist. The decision was also made to redesign secretarial jobs by reclassifying such workers as administrators and enlarging their range of duties accordingly. These measures succeeded in curtailing the number of new cases and the problem slowly receded, although it has not disappeared. At about the same period the unions on campus began to demand a formal health and safety agreement with management. This was not only a response to the RSI problem but also an outcome of the union movement's particular focus on OHS in the first years of the Hawke Labor government (from 1983). The university responded by setting up a central union/management policy committee and local area union/management committees across the whole campus. These committees developed policies on a variety of health hazards, particularly those in science labs. In the late 1980s, with the waning of the RSI problem, the head of the OHS unit was replaced by a more broadly trained OHS professional. An occupational therapist remained on the staff of the unit to deal specifically with RSI.

The establishment of the OHS unit has operated like a ratchet, preventing the university from slipping back into its previous relative indifference. While the RSI problem waned and the union emphasis on OHS declined somewhat, the existence of an OHS unit means that the issue has a higher profile than would otherwise be the case. It is in part the efforts of the OHS officer in servicing the network of union/management committees that keeps the system in operation. Moreover, the unit compiles statistics on injury rates in various parts of the university which enable comparisons to be made—favourable to some and unfavourable to others—as described in Chapter 11. And it is in part the workplace inspections made by the occupational therapist and the resulting authoritative recommendations for ergonomic furniture, which management can scarcely resist, which keeps the RSI problem at bay.

When new legislation affecting the university was enacted university administrators turned to the OHS officer for advice on whether the organisation complied and, if not, on how they could bring it into compliance. The legislation has reinforced the importance of the OHS unit in the eyes of the university in ensuring that it remains in compliance and is not exposed to legal action.

In the early 1990s the university experienced another rise in compensation costs. This time, analysis revealed that the main

reason was a small number of long-term claimants; the university therefore turned to more effective claims management rather than prevention in order to reduce costs. On this occasion, then, attention to compensation costs failed to deliver any safety improvements.

One other campus incident demonstrates the sensitivity of organisations to bad publicity. A leakage of nuclear radiation occurred in one of the scientific laboratories, resulting in the exposure of nearby workers to higher than acceptable levels of radiation. Workers complained, the matter was reported in the press, and the local radiation council closed the laboratory until the problem could be rectified. The council estimated that the problem could be solved within a matter of weeks by constructing a new radiation barrier. But the university was so sensitive to the issue that it transferred the laboratory to the control of another organisation on campus and redesigned its operations entirely. The lab remained closed for several months while this transformation was accomplished. From a technical point of view the university overreacted. But its response is an indication of its extreme sensitivity to the prospect of bad publicity stemming from health scares of this type.

This organisation provides an example of the way in which different factors engage management attention at different times. Its actions further reinforce the view taken in this book that management is often 'crisis' management. A rapid rise in compensation costs, union demands, the enactment of new legislation with possible legal consequences, bad publicity, and intervention by a regulatory agency—all these gain management attention and elicit a response. The motives of top managers may be a mixture of altruism, budgetary concerns and self-protection, but unless a crisis of some sort brings questions of OHS into prominence these motives tend not to come into play.

Economic rationalism revisited

Broadly conceived, this book is intended as an extended critique of economic rationalist thought as it applies in the area of OHS. We have seen that the assumptions of the neo-classical paradigm discussed in Chapter 2 do not apply with any consistency and that the paradigm fails to provide an adequate model on which to base OHS policy. Health and safety cannot be left to the market because so often safety does not pay. Nor is it enough for governments to construct economic incentives to encourage managements to attend

to safety. Such incentives, particularly as embodied in workers compensation, fail in a host of ways, although they do at times function as intended. There remains an important role for government in devising the most appropriate regulations, monitoring compliance with them and prosecuting violators. Governments must continue to intervene in a variety of ways if the hazards which workers face are to be minimised. Since the beginning of the industrial revolution the State has moved slowly, hesitantly, often ineffectively but ultimately decisively to protect worker health and safety. This is one area in which there is undoubtedly a role for government in protecting the interests of its citizenry. This role should not be abandoned. The economic rationalist/deregulatory tide which appeared to sweep all before it in the 1980s, and which continues to influence government thinking in relation to occupational health and safety, must not be allowed to sweep away the principle that governments have a mandate and a responsibility to intervene in the world of work to the extent necessary to safeguard the worker.

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