

1996 Royal Academy of Engineering and Royal Society of Edinburgh Lecture

THE DEVELOPMENT OF SAFETY LEGISLATION

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INTRODUCTION

It is a great privilege for me to be invited to talk to you this evening.

In 1862 the beam of a pumping engine at Hartley Colliery in Northumberland broke and blocked the only mineshaft and means of ventilation. 204 miners suffocated underground. Two years later new mining legislation required that every seam in a mine should have at least two shafts or outlets.

In 1974 a badly designed modification to a process plant at Flixborough failed, releasing several tonnes of cyclohexane at high pressure and temperature. The ensuing explosion killed a large number of people and caused extensive damage. Two years later a major environmental disaster followed the escape of highly toxic substances from a pesticide process at Seveso in Italy. One of the legislative results of these disasters was the enactment of the Control of Industrial Major Accident Hazards (CIMAH) Regulations 1984, which imposed on manufacturers using certain dangerous substances the obligation to prepare a safety case, which was to be submitted to the Health and Safety Executive (HSE), demonstrating that the major hazard potentials of the activity had been identified and adequate controls provided.

These two outcomes were very different. The first imposed a single, specific and universal duty to install a means of escape and ventilation. The second was specific only as to the requirement for a safety case. Otherwise it was directed to a general safety objective. The first outcome was ordained as an essential of every mine. The second reflected the recognition that major accidents are often the result of the coincidence of a number of factors realising their hazard potential. History is unlikely to repeat itself exactly, so the lesson of those accidents was the need to forestall harmful events by the systematic identification and control of those potentials.

The difference between those two outcomes illustrates the development of safety legislation as new approaches have taken their place beside the old. In this lecture I will be looking at some ways in which safety legislation has developed since the report of the Robens Committee in 1972. Safety legislation – by which I mean legislation for health and safety at work - covers a huge field so of necessity I have had to be selective. My two immediate predecessors in these lectures, Dr. Anthony Barrell CBE FEng and Dr. Chris Fay, were to some extent speaking from a departmental or corporate angle. My viewpoint is entirely personal. I approach my subject against the background of my experience in the profession of the law and my continuing interest in this field. Many of you will have other insights.

LEGISLATIVE METHODS

One of the fundamental questions which arises in the development of a safety regime is - How far should safety be regulated by legislation? Putting the matter the other way round, how far should those who conduct undertakings be free to manage safety for themselves? Society does not demand the total elimination of risk, so where is the line to be drawn? These are questions of policy for the regulator and, if necessary, the legislators to resolve as the regime develops. There has to be a reconciliation between the role those who create risks. The benefits of state intervention in any matter of safety have to be weighed against the costs which it imposes. The pressures exerted by the public and various interests have to be taken into account without being allowed to dictate. All this assumes that there is room for choice. European directives on the other hand do not leave much room for manoeuvre.

In this lecture I am going to be more concerned with means than with policy. In the framing of safety legislation, as it has developed in this country, there is a range of possible methods. Whatever method is used has important implications for the regulator and the regulated.

At one extreme, as it were, we have legislation which provides that an activity is to be lawful only if a condition is and continues to be satisfied. An obvious example is licensing. In this country there are few instances of this form of control but one is provided by the Nuclear Installations Act 1965 and another by the Asbestos (Licensing) Regulations 1983. The underlying justification for this form of control is that the hazard, or at any rate the perceived hazard, involved in the activity is so great that nothing else will do. However, this puts a heavy responsibility on the licensing body which requires to make a heavy investment in expertise and in other ways. The threat of the removal of a licence provides the licensing body with a strong sanction, yet by itself it is a somewhat blunt instrument. You may recall that the report in 1967 into the sinking of the drilling rig Sea Gem due to structural failure pointed out that the only sanction which was then available for ensuring the proper operation of safety procedures was the revocation of the licence¹. There were no penal sanctions which could be invoked. This report led to the Offshore Installations (Mineral Workings) Act 1971 and the

first framework for the regulation of safety offshore. A rather different approach is being worked out under the recent Activity Centres (Young Persons' Safety) Act 1995 which provides for the licensing of the providers of adventure activities. Some degree of risk is unavoidable if such activities are to accomplish their essential purpose. The Health and Safety Commission (HSC) has invited comment on its proposals for deciding which activities should attract the requirement for licensing. It is in other words a form of risk appraisal for that particular purpose.

A different type of condition is that the operator should have to demonstrate that the significant risks have been identified and are being properly managed. The model of this type of control is, of course, provided by the safety case under reg. 7 of the CIMAH Regulations. This is part of what the Advisory Committee on Major Hazards referred to as "supervised self-regulation" in their Second Report in 1979². They took the view that strongly interventionist licensing schemes had in-built drawbacks. They tended to transfer responsibility away from the operator and to discourage innovation and development. Under the CIMAH system the regulator does not formally approve or accept the case but may demand improvement until the point is reached where it is satisfied with the information which has been provided.

In other cases the condition is that the regulator should have formally accepted the safety case before the relevant activity can lawfully be carried out. This is required by regs. 4-6 of the Offshore Installations (Safety Case) Regulations 1992, following on the recommendation which I made to this effect in view of the particular hazards which exist offshore³. It may be noted that under this regime the operator or owner who has prepared a safety case is liable to be prosecuted if the procedure and arrangements described in it are not followed. Thus the rules which the operator or owner has worked out for himself become rules by which the conduct of the undertaking is judged - in other words, self-regulation fenced with criminal sanctions. There are similar provisions under the Railways (Safety Case) Regulations 1994.

The type of control which I have been considering so far is very much the exception. In the vast majority of cases the needs of the safety regime are seen as being met by the imposition of duties - and in some instances prohibitions - on those who conduct undertakings. Here again the question is - How much of a burden should be imposed on operators? When it comes to framing individual duties there are two main questions. How stringent should they be? And how prescriptive?

Strict duties have, of course, to be complied with in all circumstances. In some instances it will be comparatively straightforward to ensure compliance. In other cases it may be extremely onerous. A modern example is the requirement for the incorporation and location of emergency shutdown valves for offshore platforms which was introduced after the Piper Alpha disaster⁴. Employers may be made responsible not merely for doing something but also for ensuring that a state of affairs is maintained. You can find an old example in sec. 22(1) of the Factories Act 1937 which provided that every hoist was to be "properly maintained". In *Millar v Galashiels Gas Co (1949)*⁵ the House of Lords held that the mere proof of the failure of a hoist established a breach - even though it was impossible to anticipate that failure would occur or to explain it afterwards and even if all reasonable steps had been taken to provide a suitable hoist and maintain it properly. Whatever be the context in which a strict duty is laid down it reflects an underlying assessment as to what is imperative regardless of the risks or costs involved.

I might add that what at first sight is an all-embracing duty may turn out to be rather less than that - after it has been interpreted by the courts. Sec. 14(1) of the Factories Act 1961 required that "every dangerous part of any machinery" was to be securely fenced. When was there a "dangerous part"? A number of decisions pared down the possible scope of this expression; and the word "dangerous" was construed as limited to what it was reasonable to foresee as dangerous⁶.

What would otherwise be a strict duty may be qualified by the addition of a variety of expressions, the most familiar being "so far as is reasonably practicable". I will return in due course to the significance of that expression, but for the moment it may be noted that where there is a duty to ensure that something is made and kept safe "so far as is reasonably practicable" the word "safe" has been treated as not dependent on what was reasonably foreseeable. The very existence of that expression indicates that the word "safe" is to be looked at objectively⁷. In this instance the duty-holder has to exercise his judgment as to what is reasonably practicable; and if he is prosecuted for a breach he will be able to defend himself by seeking to establish that strict performance was beyond what was reasonably practicable. Thus it was held by the House of Lords in the reparation case of *Nimmo v Alexander Cowan & Sons (1967)*⁸ that when a pursuer proved that a place of work was not "safe" under sec. 29(1) of the Factories Act 1961 the onus passed to the employers to prove that they had done all that was reasonably practicable to make it safe. The same approach applies to the case of prosecutions eg. under sec. 2 of the Health and Safety at Work Act 1974⁹.

So far I have been dealing with stringency. I now turn to prescription. There is a tendency for people to talk about prescription in safety legislation as if it were an option. Every requirement of legislation is by its nature prescriptive. I am

concerned with the spelling out in detail of what is to be done. When one talks of detail it is important to distinguish between the type of detail which specifies the steps which an employer should take in order to identify hazards, assess risks or select preventive measures. As we will see a number of such requirements have been made over the last two decades. These are sometimes referred to as being "prescriptive in process". They should be distinguished from the type of prescription which actually spells out the safety measures and precautions to be taken, sometimes referred to as "prescriptive in outcome". It is with the latter that I am particularly concerned.

Here is a critical choice for any one who is considering how safety legislation should be framed. The more specific the language the easier it is for those who are affected by it to know what is expected of them. The task of detecting, and taking proceedings for, non-compliance becomes more straightforward and less at risk of being inconsistent. In any event solid, consistent rules satisfy law-makers' longing for certainty.

The other side of the coin is that the more specific the language the greater the risk of it being over-rigid, obsolescent, unduly complex, let alone unable to cover every contingency. More fundamentally, over-prescription may detract from the responsibility which should be exercised by the duty-holder.

It was considerations such as these which led me to recommend in the field of offshore safety what while there would be a continuing need for some regulations which prescribed detailed measures, the principal regulations should take the form of requiring that stated objectives are met¹⁰. Thus Reg. 4(1) of the Offshore Installations (Prevention of Fire, Explosion and Emergency Response) Regulations 1995 provides: "The duty holder shall take appropriate measures with a view to (a) protecting persons on the installation from fire and explosion; and (b) securing effective emergency response".

That last point highlights that it is not a matter of all or none of the regulations being prescriptive as to detailed safety measures. According to subject matter the regulator has to decide on the correct "mix" to put forward; and this depends on whether the view is taken that it is imperative that the safety objective be achieved only in one particular way.

I now turn to consider a number of aspects of safety legislation in order to see how matters have developed since the time when the Robens Committee reported in 1972¹¹. The extent to which legislation should be stringent or should prescribe is a recurring theme.

THE STRUCTURE AND COMPONENT PARTS OF THE LEGISLATION

Robens found that the existing legislation - 30 Acts and 500 sets of regulations - was defective in that there was too much law, it was over-elaborate and it was preoccupied with the physical circumstances in which work was done as opposed to the workforce and the systems of work.

There was nothing new in complaints about the state of safety legislation. The introduction to the first edition of Redgrave's Factories Act published in 1878 - the year in which the first consolidation Act was passed - referred to a Royal Commission which had been appointed three years before in order to deal with

"a perfect chaos of regulations - all good in themselves when enacted - all having a direct purpose, which most of the trades have outlived, and which required constant care and consideration to prevent an application of them which would have imperiled that impartiality and that uniformity of administration which are absolutely essential to secure harmonious and cheerful co-operation".

Robens recommended a new structure. At the top, as it were, would be a clear statement in an enabling Act of the basic principles of safety responsibility. Regulations made under the Act would wherever practicable be confined to statements of broad requirements in terms of the objectives to be achieved. They would be in three main groups - the first dealing with general matters applicable to most forms of employment, such as general environmental standards and notification of accidents; the second dealing with particular types of hazard; and the third dealing with particular industries where it might be convenient and helpful to group all the relevant statutory provisions together into comprehensive and self-contained industry-regulations. Robens saw the answer to many of the defects of the existing law as lying in a switch towards greater reliance on standards and codes of non-statutory origin. No regulation should be made before detailed consideration had been given as to whether or not the objects might adequately be met by a non-statutory code of practice or standard. In this way regulations would often be dispensed with. The regulations should in any event be made simpler and consultation less cumbersome. Industry should be encouraged to deal with more of its own problems¹².

The Health and Safety at Work Act 1974 was remarkable in a number of respects. Previous safety legislation had proceeded in a piecemeal fashion with no general view of the subject. As Sidney Webb pointed out in 1910: "Each successive statute aimed at remedying a single ascertained evil"¹³. Under the 1974 Act there was for the first time an

attempt to unify safety legislation by provisions which were not confined to a particular type of workplace or work but applied in general, so bringing many thousands of workers within the protection of the law. That protection, it may be noted, involved that a breach could be committed not merely during the time when they were working but also prior to their coming to work¹⁴.

To this end the **general duties** laid down by the Act, including sec. 2 with which I am mainly concerned at the moment, were modelled on duties under the common law, subject to the qualification that they were imposed in respect of the whole workforce; and that their breach was to give rise to prosecution as opposed to civil liability. These duties were clearly aimed at bringing home responsibility for accident prevention. They were all qualified by the words "so far as is reasonably practicable".

It may be noted that sec. 2 which started off with the general duty of every employer "to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees" went well beyond the scope of merely physical conditions. The employer's duty included a safe system of work and the provision of information, training and supervision. The decision in *R v Swan Hunter Shipbuilders (1981)*¹⁵ showed that the general duty could involve the employer in having to give information or instruction to the employees of someone else. Sec. 2(3) imposed a duty on every employer to prepare and revise a written statement of his safety policy and bring it to the notice of all his employees.

The 1974 Act was not merely wide ranging in the way in which it imposed duties on employers towards those who were employed by them. It also, in terms of sec. 3, imposed a duty on every employer "to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health and safety", so extending protection to the employees of others and to the general public. This reflected the conclusion of the Robens Committee¹⁶. Sec. 3 is less explicit than sec. 2 as to what may be required. However the *Swan Hunter* case, to which I have already referred, showed that it also extends to the provision of information and instruction.

A number of recent decisions serve to emphasise that sec. 3, like sec. 2, sets out a strict requirement, subject only to the question of what is reasonably practicable. In *R v Board of Trustees of the Science Museum (1993)*¹⁷ it was held that the word "risk" in sec. 3 conveyed the idea of the possibility of danger, which was satisfied in that case by proof of the possibility that the bacterium causing legionnaire's disease might emerge from the museum's cooling tower. The court observed that it faced with equanimity the prospect that all cooling towers in urban areas were caught by sec. 3, subject to the defence of reasonable practicability. More recent decisions have shown also that the duty under sec. 3 cannot be avoided either by delegating it to an independent contractor or by showing, in the case of a corporate body, that its "directing mind" or senior management were not involved in the breach¹⁸. These decisions show how readily the burden of proof may shift to the accused.

As regards new **regulations** a power was conferred by sec. 15 of the 1974 Act to make them for a range of purposes including those set out in a schedule to the Act. The regulations were evidently not intended to add to the scope of the general duties. They might on the other hand impose duties which were more strict than those general duties.

In the years which followed the HSC made steady, though sometimes protracted, progress in introducing new regulations which dealt with particular types of hazard "across the board", so reflecting the comprehensive coverage intended by Robens and the Act. Examples were the Control of Lead at Work Regulations 1980 and the Control of Substances Hazardous to Health Regulations 1988.

The disastrous events at Flixborough and Seveso showed that the concern which Robens had expressed for the protection of the public was not misplaced. The CIMAH Regulations made provision not merely for the protection of workers in industries where there was major hazard but also for the preparation of off-site emergency plans and the provision of information to outsiders.

The first set of regulations which were designed to implement EC requirements were made in 1978. Since that time there has, of course, been a major shift as the influence of the EC on health and safety legislation has continued to grow, particularly since the Single European Act which came into force in 1987 and made health and safety directives subject to qualified majority voting. At least 80% of the implementing legislation relates to the period since it came into force. Whereas much of the earlier EC-based regulations were detailed technical provisions of limited impact, the later regulations, and in particular "the six pack", dealt with substantive and wide-ranging provisions applying to all types of workplace; and involved major alterations to existing legislation along with the introduction of novel duties.

In this period the HSC found itself involved in what its then Chairman Sir John Cullen referred to in its annual report for

1988/89 as "simultaneous and somewhat headlong negotiations on a very large number of directives and programmes". In this process of negotiation the HSC sought to commend the UK legislative model as a starting point for drafting. As regards implementation of the directives its strategy was to avoid disrupting the basic legal framework established by the 1974 Act and minimise change to the most recent regulations; and to propose regulations which met directives but which generally did not go beyond them¹⁹.

If we look at the state of legislation today we can see that the general duties in the 1974 Act survive although there has been some blurring of the distinction between the Act and the regulations which Robens had in mind. It may be said that the Management of Health and Safety at Work Regulations 1992, in particular their provisions for the carrying out and use of risk assessment, elaborate on the general duties stated in the Act. That may be no bad thing as there was some force in the criticism that there was little guidance given as to how sec. 2 of the Act was to be implemented.

The HSC had also been charged with the task of replacing the older health and safety legislation with the new style. It had made substantial progress despite being given various additional responsibilities and having to grapple with the demands made by the European directives. However, there were still, as at May 1994, 28 Acts and 367 sets of regulations, according to the Main Report in its Review of Health and Safety Regulation. The report accepted that "health and safety law is still too voluminous, complicated and fragmented. This inhibits compliance by employers, particularly small firms". The fragmentation and complexity of some of the legislation was "the result of 100 years of development, in which prescriptive regulations applying to specific industrial processes have given way progressively to more modern legislation of wider application, which has in turn been overlaid by EC requirements"²⁰. More recently the HSC has invited discussion of ideas for reducing complexity by rationalising common requirements in regulations, such as those relating to risk assessment and the provision of information, instruction and training.

The final tier in the safety regime under the 1974 Act, which was to provide subordinate detail was to consist of **approved codes of practice (ACOPs) and guidance**. The ACOPs have a limited legal effect to the extent that in the case of criminal proceedings proof of non-compliance with the relevant ACOP provides a presumption of guilt. It is then for the accused to satisfy the court that compliance was obtained in some other way.

As regards the approved codes of practice it may be noted that despite what Robens had envisaged they have been produced almost entirely by the HSC. The procedure for consultation in regard to those codes became similar to the consultation in regard to regulations; with the danger that, as a trade union official once put it, "all the rules rise up a tier". It is also noticeable that when it came to implementation of Article 6.2 of the Framework Directive which dealt with the principles of risk prevention the HSC chose to do this not in the Management Regulations but in para. 27 of the ACOP. In its main Report²¹ the HSC stated that confusion had arisen because mandatory material had been included in codes of practice; and in its recent consultative document on the role and status of such codes it restated its aim to return to a situation where if such codes are used they give practical guidance on specific hazards or to key sectors of industry on the implementation of the legislation, especially legislation which applies across the board²².

The protection of third parties is a respect in which the UK legislation differs from that of the EC directives. Thus, for example, regulations dealing with hazardous substances at work have included provision for the protection of persons other than the employees of the duty-holder. Reg. 3 of the Control of Asbestos at Work Regulations 1987 provides that an employer "shall, so far as is reasonably practicable, be under a like duty in respect of any other person who may be affected by the work activity, whether at work or not". So also the Management Regulations were so worded as to go beyond the Framework Directive by requiring that risk assessments under Reg. 3 should take also account of the risks to the health and safety of persons not in the employment of the employer. This attention to the interests of third parties, including members of the public, is one of the reasons why the HSC maintains that the structure of EC directives does not present an adequate and comprehensive alternative to the framework established under the Act of 1974²³.

THE PATH TO SELF-REGULATION

When Robens looked at the system for protecting people at work and protecting the public from hazards of industrial origin he saw that system as comprising broadly two elements: on the one hand regulation and supervision by the state; and on the other industrial self-regulation and self-help. The most fundamental issues before the committee were concerned with the relationship, balance and interaction between those elements. In the end of the day their report recommended a shift in emphasis from the first element to the second. This had two aspects: the general one was that of encouraging industry to deal with more of its own problems so enabling official regulation to be more effectively concentrated on serious problems where it was appropriate and necessary²⁴. This is the aspect to which I have already referred. The second aspect was the more specific target of altering the style in which the legislation was expressed so as to encourage self-regulation on the part of the individual employer.

Robens found that the existing legislation was generally prescriptive in the sense that it set out often in great detail a comprehensive set of measures which in certain narrowly -defined circumstances laid down what was to be done. Robens considered that it was necessary to reconcile flexibility with precision. So, where practicable, regulations should be goal-setting²⁵. This represented a fundamental change of approach.

The older style of safety legislation was very much part of a general approach to legislation in this country. A high premium was placed on achieving certainty. In 1891 an English judge observed:

"It is necessary to attain if possible to a degree of precision which a person reading in bad faith cannot misunderstand²⁶."

Hand in hand with that style of legislation went the way in which it was interpreted by the courts in a literal manner, sometimes with remarkable results. One example will suffice. Some of the protection which at first sight sec. 14 of the Factories Act 1961 gave to the workforce had been rendered illusory through a series of technical and artificial distinctions²⁷.

Since those times the Courts have moved increasingly towards a purposive construction under which they may make the literal meaning of the enactment take second place and prefer a construction which will ensure that its underlying purpose is not defeated. The modern purposive approach, in the words of Lord Diplock in a case in 1972, is

"to read the Act as a whole to ascertain the social ends it was intended to achieve and the practical means by which it was expected to achieve them. Meticulous linguistic analysis of words and phrases used in different contexts in particular sections of the Act should be subordinate to this purposive approach"²⁸

I am reminded of the words of St. Paul: "The letter killeth, but the spirit giveth life" (2 Cor. 3.5). It was T.S. Eliot who put the English lawyer's motto the other way round!

The significant point for my purpose is that it is by now settled by a number of decisions over the last ten years that the courts of the United Kingdom are under a duty to give a purposive construction to regulations issued for the purpose of complying with directives²⁹ and, in the interpretation of domestic legislation in any field covered by a directive, to construe the legislation in accordance with the interpretation of that directive by the European Court of Justice, so long as this can be done without distorting the meaning of the domestic legislation³⁰. This is so whether the domestic legislation comes after or before the directive³¹. It will be interesting to see what will be the result of the use of a purposive construction if any challenge is made to the adequacy of the United Kingdom's implementation of any of the European directives.

I return to the implementation of Robens. The shift from prescriptive to goal-setting legislation was seen as a major demonstration of the way towards self- regulation and hence towards a greater sense of safety awareness as part of a true safety culture. The legislation proceeded on the basis of the principle which Robens had enunciated, namely that the primary responsibility for accident prevention lay with those who created the risks and those who worked with them³².

Likewise when the Advisory Committee on Major Hazards addressed the problem posed by major hazards they saw the way ahead as lying in regulations which were "inductive" in the sense that they required management to work out its own solution³³. Similar comments may, of course, be made in regard to offshore safety cases. The general duties under sees. 2 and 3 of the 1974 Act imply that employers are made responsible for regulating safety in regard to matters which are not explicitly regulated by other legislation. Sometimes this can have consequences which may not at first sight be obvious. Thus an official of a body corporate may incur criminal responsibility if he fails to carry out the policy statement prepared under sec. 2(3)³⁴.

Prescription was plainly a battleground for the HSC in their negotiations about directives. I think it was this sort of thing that Sir John Cullen was thinking about when he said in an interview reported in September 1991 that "the important thing is to iron out any 'nonsenses' at directive level"³⁵.

When one looks at the six pack of regulations it is clear that in some respects they are more prescriptive than the earlier regulations under the 1974 Act and certainly more prescriptive than Robens would have envisaged. Up to a point their type of prescription would appear to fulfil the useful purpose of focusing the attention of the duty-holder on what he needs to do in order to work out what safety measures he should take and also whether they are achieving what they should. In that sense the more prescriptive language of a six pack seems to be a useful development in underpinning the general duties of the 1974 Act. However, in other respects their language seems to go too far down the road of telling the duty-holder exactly what to do. Is it really appropriate to provide the kind of detail that one finds in Reg. 11 of the Workplace (Health, Safety and Welfare) Regulations 1992? It provides by para. (3) that:

"A suitable seat shall be provided for each person at work in the workplace whose work includes operations of a kind that the work (or a substantial part of it) can or must be done sitting" and by para. (4): "A seat shall not be suitable for the purposes of para. (3) unless - (a) it is suitable for the person for whom it is provided as well as for the operations to be performed; and (b) a suitable footrest is also provided where necessary".

"SO FAR AS IS REASONABLY PRACTICABLE"

The history of this expression goes back at least as far as the mining legislation of the 1870s. From there the expression was brought into the Factories Act and then on into the Health and Safety at Work Act 1974. It was not until after the second world war that this expression obtained the status of a major principle in safety legislation. This development derived from the well known opinion of Lord Justice Asquith in Edwards v NCB (1949), in which he said:

"Reasonably practicable' is a narrower term than 'physically possible' and seems to me to imply that a computation must be made by the owner, in which the quantum of risk is placed on one scale, and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) is placed in the other, and that if it be shown that there is a gross disproportion between them - risk being insignificant in relation to the sacrifice - the defendants discharge the onus on them. Moreover, this computation falls to be made by the owner at a point of time anterior to the accident"³⁶.

This expression was given a fundamental role in the general duties set out in the 1974 Act and many of the regulations made under it. While some risks were so great that nothing less than a strict duty was required, the general approach was to be that most risks could be controlled. In other words they lay in the middle ground between those cases in which the risk was so great that it must be excluded and those cases where the risk was, or had been made, so small that no further precaution was necessary. This refers to the approach which became the ALARP principle. There still are, of course, regulations where a strict duty is imposed, such as Reg. 7 of the Electricity At Work Regulations 1989 which deals with the insulation, protection and placing of conductors, but the general approach, which may take a variety of forms, is based on what is reasonably practicable. For example Reg. 12 of the Control of Asbestos at Work Regulations 1987 provides: "Every employer shall prevent, or, where this is not reasonably practicable, reduce to the lowest level reasonably practicable, the spread of asbestos from any place where work with asbestos is carried out".

The expression "so far as is reasonably practicable" did not appear in any of the European directives which led to the six pack but it has been inserted in a number of the implementing regulations, presumably on the view that this was consistent with the underlying intention of the directive it was designed to implement.

I return to the concluding words of Lord Justice Asquith: "The computation falls to be made by the owner at a point antecedent to the accident". In other words this looks to accident prevention through the assessing and managing of risk rather than through reaction to accidents. A number of explicit requirements for risk assessment have appeared in most of the important regulations since the 1974 Act, such as those dealing with asbestos, noise and substances hazardous to health. In the Management Regulations and most of the other members of the six pack risk assessment occupies an even more prominent role. The HSC has referred to the duty of risk assessment along with the general duties under the 1974 Act as the core of health and safety law in the United Kingdom, applying "wherever the cap fits"³⁷.

Under Reg. 3 of the Management Regulations every employer has to make a "suitable and sufficient assessment" of risk, to identify what he has to do in order to comply with "the relevant provisions", which means the 1974 Act and the legislation associated with it. The assessment is thus a guide to the judgment which the employer has to make.

In view of the peculiar vulnerability of offshore installations it is not surprising that the offshore safety case has to go a good deal further. It has to show that (i) the management system is adequate to ensure such compliance; (ii) there are adequate arrangements for audit and the reporting of it; and (iii) all major hazards have been identified, and risks evaluated and measures taken to reduce them to the lowest level that is reasonably practicable³⁸.

In the result we can see that the concept of reasonable practicability is firmly entrenched as a means of expressing the employer's responsibility for the management of safety, in accordance with the philosophy of Robens; and that as it has developed the legislation has underlined and reinforced that approach.

I observe in the passing that the HSC have said that there is a different tradition of interpretation of legislation in the continent of Europe where apparently absolute requirements may be moderated in practice³⁹. It is stated that the concept of risk assessment was "negotiated into the directives as a means of building structures which approximate to the British concept of 'reasonable practicability'". It may be open to question whether at least as a generality continental judges are prepared to go quite as far as the HSC has suggested. There seems to be no consistent pattern as between one country and another; and it may be that when the policy on enforcement is also taken into account there is not a great deal of

difference between the countries in the EC. However, the fact remains that risk assessment forms a distinctive feature in the directives from which the six pack have been derived.

CONCLUDING REMARKS

In health and safety legislation a great deal has been achieved in putting into practice and maintaining the principles of the Robens Report. However, much of the legislation is more complex, pervasive and specific than envisaged. The process of change in the regulatory system, which was always going to take a long time, has been distorted and disrupted by introduction of EC based provisions. It is somewhat ominous that the HSC has stated that, since the main force for legislative change is now the EC, a new architecture for health and safety legislation might in due course emerge in order to take account of the European dimension⁴⁰. I wonder if after another twenty years or so have passed the legislative scene will look very different from the present?

If you think we have problems with the system in this country, you can take some comfort from the fact that it is not run on the lines which have been adopted in the United States. As Dr Trevor Kletz has pointed out, in that country "it seems to be believed that industrial accidents can be prevented by the government writing a book of regulations that looks like a telephone directory, though it is rather less interesting to read"⁴¹. This is the result of the pursuit of precision at all costs. In a recent book with the chilling title "The death of common sense - how law is suffocating America" the author cites a number of examples of over-regulation, such as the fact that at one point there were 140 regulations on wooden ladders, including one specifying the grain of the wood; and at another point bricks were designated as a toxic substance so that brick manufacturers had to send out forms describing for the benefit of workers how to identify a brick and giving its boiling point - above 3,500°F. As the writer observes, it is as if the goal of safety is obscured from view by all the rules which are intended to advance it⁴². So we have quite a few things to be thankful for.

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