UNIVERSITY OF STRATHCLYDE

THE LAW SCHOOL

Strict Liability for Product Defects: The Impact of the New Regime

by

Alistair M. Clark LL.B.

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CHAPTER FIVE

RECOVERABLE LOSS

One of the fascinations of product liability law is its treatment of the various types of damage which can be caused by a defective product. It is generally accepted that a broad distinction can be drawn between pure economic loss and other types of damage caused by products (personal injury, property damage, and economic loss consequential upon personal injury or property damage) with the general rule that losses of the former category cannot be recovered.[1] This division, which as we will discover is rather difficult to draw, is mirrored in the broad scheme of the Consumer Protection Act 1987, which excludes recovery of pure economic loss. Also, as the short title suggests, the Act excludes damage to commercial property.[2] The dichotomy between purely economic loss and other damage will be reflected in the treatment in this work of non-recoverable and recoverable loss. This current chapter will focus upon losses other than the purely economic, and the next deals with pure economic loss. It will be noticed that some difficulty has been experienced by courts regarding the treatment of damage to the defective product itself, including damage

caused to a product by a defective component part and that in only limited circumstances are these losses recoverable. Recoverable losses resulting from such damage are dealt with in this current chapter. The question of recovery of losses which are the result solely of a product failing to match the standards expected of it raises interesting issues as to the nature of the contract/tort dichotomy. These are of particular significance as regards pure economic loss and hence discussion of these matters is in the main postponed until the next chapter.

It would be an apparent anomaly of this area of tort law, in the context of negligence liability in general as well as strict liability under the Consumer protection Act 1987, if the user of a product were able to obtain compensation where the product causes personal injury, or where it causes damage to other property, but cannot obtain redress where the product damages itself or without such damage simply fails properly to function, posing no threat of damage to person or property. What is the position, for example, where I purchase a new motor car, which fails to operate? Is no remedy in negligence (in the absence of course of mis-statements' liability) available? Will there be a basis for liability under the new Act? Does the law of tort/delict refuse to bring home to the producer of such a product liability for the loss caused to the user, even although the producer

indirectly has appropriated much of the price paid by the purchaser of the car? Is the law content to channel liability back to the producer via a contract claim by the retailer, or any other party in the chain of supply who has been made liable to the buyer? Of course, there will be significantly less room for an eventual contract remedy against the producer if the purchaser bought in a private sale and hence without the protections afforded by the Sale of Goods Act 1979.[3]

Matters get even more involved when consideration is given to damage to the defective product itself. Let us suppose that a car is defective because of a component part such as a fuel pump which has failed. Assume also that the pump failed when the car was being driven, and that this caused damage to the engine, but no damage to any other property or to any person. Is this a case of pure economic loss, which prima facie cannot be recovered? Or is it a case of damage to property, so as to ground a claim? Has the product itself been damaged? This raises the issue of whether a car is to be treated as a product for these purposes, or whether the component part alone should be so regarded.

This chapter will examine the law on recoverable damage caused by defects in products with a view to answering such questions. Against the background of the existing

law, the rules in the 1987 Act will be discussed. Thereafter, the way in which the American system has coped with these difficulties will be analysed, before considering the potential development of the law in this area.

Recoverable loss - the existing law

The initial difficulty is to draw a distinction between pure economic loss and other losses. Following Junior Books v The Veitchi Co.,[4] in which the pursuers recovered for economic loss caused by defects in flooring, it might be thought that pure economic loss could simply be defined as financial loss caused solely by the fact that a product, which poses no threat of harm to person or property, is defective. However, at least some judges have been reluctant to describe even the loss in Junior Books as purely economic. In Tate & Lyle Industries v GLC,[5] Lord Templeman (with whose speech both Lord Keith and Lord Roskill agreed) spoke of the damage in Junior Books as being damage to property, thereby characterising the loss in that case as other than purely financial. Such a view does seem to stretch the categories of loss in this area too far and the traditional view that the loss in Junior Books was purely financial surely is the more tenable.[6]

If we accept the definition of purely economic loss just given, we are still far from a clear picture of

the full range of possible losses. There are at least five categories of loss which could be caused by a defective product:[7]

(a) damage to person or property caused by a defective product, and financial losses consequent upon such damage;

(b) the cost of repair or replacement of products so as to remove the danger threatening aspect of the defect, and financial loss such as loss of profits consequent on the product being unusable;

(c) damage to the product itself caused by the defect in it;

(d) the cost of repair or replacement of products so as to remove a defect which does not pose a threat to person or property;

(e) loss of profits or other financial loss caused solely by the fact that the product is defective; that is, where it poses no threat of damage to person or property or to itself.

The line between recoverability and non-recoverability is, it is suggested, drawn before items (d) and (e) above.

The first three types of loss are examples of actual or threatened physical loss and consequential financial loss, as distinct from items (d) and (e) which are types of pure economic loss other than that resulting from physical damage. The last two heads could be viewed as loss resulting from the simple failure of the product to match expectations. So, under head (d), the cost of repairing the product in order to remove the defect could be characterised as purely economic loss. Arguably, the cost of repairing a product which has caused some damage to person or property or which poses a threat of such damage, is itself pure economic loss. The simple fact that such a loss is tied in with a larger claim for actual or threatened property damage and consequential financial loss, does not disqualify that portion of the loss from being purely economic. Similarly, financial loss consequent upon the product being unusable (where it poses no threat of damage to person or property), such as loss of profits, may be regarded as not related to or consequential upon personal injury or property damage, and hence as purely economic. These considerations prompt the following division: physical damage to person or property, and consequential financial loss, is the province of the current discussion. Included in this discussion will be physical damage to the product itself, the cost of repairing or replacing a defective product which poses a threat to person or property, and financial loss consequent upon such a product being unusable. Cost of

repair of a product posing no such threat, financial loss consequent only upon the unusability of this type of product, and pure loss of expectation in that the product does not match the required standard, will be discussed in the next chapter.

(a) Personal injury, property damage and consequential financial loss

Little need be said about the recovery of damages for personal injury or damage to property since the normal rules of damages in delict/tort apply to such losses when caused by product defects, and since the recoverability of such losses is long established. Full discussion of this matter is covered in the standard texts.[8] Of more interest for our purposes is the recovery of economic loss consequential upon damage to property. As well as the standard requirement of forseeability of the economic loss, it must be causally proximate to the physical harm.[9] But there is an additional condition of liability. In a series of recent decisions [10] the appellate courts in Scotland and in England have reasserted the established rule (which had nonetheless contained some room for argument[11]) that only a person with a possesory or proprietary right to the property damaged can sue to recover economic loss consequential upon that damage. Thus, in The Aliakmon[12] Lord Brandon stated:

"My Lords, there is a long line of authority for a principle of law that, in order to enable a person to claim in negligence for loss caused to him by reason of loss of or damage to property, he must have had either the legal ownership of or a possessory title to the property concerned at the time when the loss or damage occurred, and it is not enough for him to have only had contractual rights in relation to such property which have been adversely affected by the loss of or damage to it."[13]

This principle has recently been applied in three Scottish cases [14], including North Scottish Helicopters v United Technologies Corp.[15] in which the lessors of a helicopter sought to recover for damage to the helicopter and for consequential economic losses, resulting from alleged defects in the rotor brake unit which had, it was argued, caused a fire. On a preliminary proof, the lessors were held to be entitled to sue. The principle has also recently been applied in the Court of Appeal, in Transcontainer Express Ltd. v Custodian Security Ltd.[16] To this general rule there may [17] be some very limited exceptions [18] but these possible exceptions are of no application in the ordinary product liability case.

In one of the few relatively modern product liability

cases in which the issue of recovery of consequential financial loss has been discussed, the court was prepared to leave the question open. In Lambert v Lewis [19] the House of Lords considered an appeal from a decision that the retailers of a defective towing hitch, who had incurred liability for the deaths caused by the defect, could not pass that liability on to the manufacturers. The House of Lords did not require to decide that particular point, having allowed the retailers' appeal on other grounds. However, Lord Diplock stated that he did not wish the decision to be regarded as approval for the proposition that:

> "where the economic loss suffered by a distributor in the chain between the manufacturer and the ultimate consumer consists of a liability to pay damages to the ultimate consumer for physical injuries sustained by him, or consists of a liability to indemnify a distributor lower in the chain of distribution for his liability to the ultimate consumer for damages for physical injuries, such economic loss is not recoverable under the Donoghue v Stevenson principle from the manufacturer".[20]

There is a strong argument that the decisions in The Aliakmon [21]and in Candlewood[22] solved this issue by denying recovery in the circumstances outlined by Lord Diplock. However, in The Kapetan Georgis,[23] (FT Oct.

15 1987) a chain claim of the type referred to in Lambert [24] was held to be arguable in tort. Thus, it is possible that in a chain claim which originates from a claim based upon physical damage the general rule reaffirmed in the recent cases may admit of exception.

It could be argued, in the wider frame, that the requirement that the loss be consequential upon physical damage is a rather arbitrary and crude test in an area fraught with definitional difficulty and which merits a rather more subtle approach. What is economic loss in the first place?[25] Any damage to property causes economic loss in the sense that the property is worth less than before the damage; financial compensation is the preferred method of compensating for such harm, and it may seem rather artificial to classify the loss as other than economic. The standard counter argument is of course that a line has to be drawn somewhere, lest the floodgates be opened. Pragmatic considerations, including the need for legal practitioners to be able accurately to advise clients, mean that the physical loss criterion is preferred to a more sophisticated or complex approach. There is, it is suggested, a forceful counter argument that a generally expressed floodgates fear is a rather inexplicit policy reason for denying or limiting liability; a more sophisticated and rational approach which admits consideration of such factors as the availability of insurance cover and differences between commercial and

non-commercial pursuers might produce a better formula for drawing the line.

Recent decisions do not however evidence any willingness on the part of the courts in the UK to develop a more appropriate tool than the physical loss test. For example, in Muirhead v Industrial Tank Specialities[26], the Court of Appeal strongly reaffirmed the predication of economic loss recovery on the presence of physical damage. The facts of the case are relatively simple and provide an excellent illustration of the dichotomy between types of loss. A wholesale fish merchant lost his entire stock of live lobsters when the process by which the tanks were to be oxygenated failed to perform its task. This failure was traced to defects in the electric motors of water pumps which had cut out when they should have been in operation. Claims against the supplier of the fish storage tank and the supplier of the pumps having proved unsuccessful the plaintiff was left with an action in tort against the manufacturer of the electric motors. It was established that these motors had suffered frequent failures in operation due to their inability to cope with the voltage range of the UK electricity supply. Thus there was no real difficulty in asserting a case based on the defectiveness of the product. The plaintiff argued that the various losses which he had suffered, including the market value of the lobsters and the cost of cleaning out the lobster

tanks, ought to be recoverable in a tort action on the basis, inter alia, of Junior Books. Although in the leading opinion Robert Goff LJ did not mention the case of Spartan Steel & Alloys Ltd. v Martin & Co. (Contractors) Ltd.[27] his two colleagues in the Court of Appeal felt constrained to follow this decision and the court unanimously disallowed recovery in tort for the purely economic loss. In Robert Goff L.J.'s words:

> "I therefore conclude that the manufacturers should be held liable to the plaintiff , not in respect of the whole economic loss suffered by him, but only in respect of the physical damage caused to his stock of lobsters, and of course any financial loss suffered by the plaintiff in consequence of that physical damage" [28]

At first instance, the physical damage to the lobsters was held to be beyond recovery as unforseeable, but the economic losses were held recoverable on the basis of Junior Books. Is there any material difference in a case such as the present between the first instance result, liability for economic loss, and the result on appeal, liability for physical damage and consequential economic loss? Put simply, which of the heads of damage claimed by the plaintiff were outwith the category of consequential economic loss?

This raises the more general question of the meaning of

'consequential' in this context. The formulations used in the cases include:"truly consequent upon material damage" [29]; "directly and immediately connected"[30]; "consequential upon forseeable physical injury or damage to property"[31] Rightly, these have been described as "not particularly illuminating" [32] for the judges have not in fact given any real criteria for deciding whether a particular loss is or is not consequential. In this connection, Lord Denning's view [33] that the courts experience no real difficulty in placing cases in one category or the other is of little assistance to legal advisers for whose apparent aid the current need for pragmatism is invoked.[34] It is well established that consequential pecuniary loss can include potential gains such as loss of profits which failed to arise because of the physical damage.[35] For example, it does seem clear that loss of profits on intended sales of the lobsters in Muirhead was a causal consequence of physical damage to them, as indeed was the cost of cleaning the tank. Yet the Court of Appeal declined to treat loss of profits as consequential, placing this loss it seems in the category of the purely economic.[36] Obviously, the physical harm to the plaintiff's property - the lobsters themselves - was compensable. But additional sums claimed by the plaintiff as loss of interest on capital which had been deployed, and/or loss of availability of working capital would appear to have been outwith recovery. As O'Connor L.J. made plain, the decision in Spartan Steel

had to be preferred to that in Junior Books:

> "The heads of damage in the statement of claim show that this case is so close to Spartan Steel and Alloys Ltd. v Martin & Co. (Contractors) Ltd. [1972] 3 All ER 557,[1972] QB 27 that in my judgement it should not be distinguished from that case; until it is overruled we are bound by it. The defendants negligently cut the electricity to the plaintiffs' factory, a batch of metal in the furnace was damaged and they were unable to process four further batches. By a majority this court held that they were entitled to recover the value of the damaged batch, and the consequential loss of profit thereon, but could not recover the loss of profit on the lost batches."[37]

It is regrettable that the court did not attempt a more clear and sophisticated analysis of the issues presented in this case. For example, the plaintiff claimed for the cost of the pumps; was this irrecoverable as pure economic loss or recoverable as physical damage to property? What was the product, the pump or the component motor? Was there damage to the defective product itself?

The lack of treatment of these matters in the decision is disappointing but of more pressing importance for the present discussion is the impact of the case on the

recoverability by a consumer of loss caused by a defective product. Any hint that the decision in Junior Books created a major inroad into the Spartan Steel principle has been rejected, and the position remains that the consumer cannot recover from the manufacturer for loss other than that which is, or which is consequent upon, personal injury or physical damage, unless there was a very close proximity or relationship between the parties and the ultimate purchaser had placed real reliance on the manufacturer rather than the vendor.

In the light of Muirhead, it must be concluded that Junior Books has had a relatively minor impact upon Spartan Steel. In the former case Lord Roskill countenanced the possibility of preferring the dissent in Spartan Steel to the majority view,[38] but later decisions have effectively restricted Junior Books to its own facts.[39] This has significantly diminished the prospect of any such a re-evaluation of the principles laid down in Spartan Steel.

(b) Cost of repair or replacement of products which pose a threat of harm to person or property, and consequential loss

The traditional approach to the question as to whether repair or replacement costs and any consequential

financial loss are recoverable in delict has been to assume that the protection afforded by Donoghue v Stevenson[40] principles related only to safety deficiencies in products. In the result, such costs were perceived as irrecoverable unless the defective product posed a threat to persons or property. Authority for this proposition can be traced to Spartan Steel and in particular to Anns v Merton LBC,[41] in which the cost of removing a danger caused by an unsafe house was held to be recoverable in tort. The measure of damages in such an instance is the cost of remedying the defectiveness of the product.[42]It may be, however, that the danger-threatening defect is irremediable by repair, causing the product to be a total loss. Here, the cost of remedying the defect in the product is the value of the product itself since removal of the danger necessitates replacement of the product. In Batty v Metropolitan Realisations Ltd.[43], another defective premises case, the plaintiff was permitted to recover in tort (and in contract) damages equal[44] to the value of the property. So, the pursuer could effectively 'get his money back' as long as the defect in the product created a risk to safety.

In Junior Books both Lord Keith [45] and Lord Roskill [46] were of the view that recovery from the manufacturer in tort or delict was possible where the plaintiff had repaired or replaced defective products so as to remove a threat of danger to person or

property. The matter has also been discussed in an important Canadian decision. In Rivtow Marine Ltd. v Washington Iron Works [47], the charterers of a barge which was fitted with cranes suffered loss when it was discovered that the cranes were dangerously defective. The plaintiff charterers were unsuccessful in their claim to recover in tort for the cost of repair, the court taking the view that such damage sounded in contract and not in tort. However, damages for loss of profits during the time when the crane was undergoing repair was considered held to be recoverable in tort. It was held that the manufacturer and the distributor were liable for this loss on the basis that they knew about the defective nature of the crane and ought to have warned the plaintiff of the dangers. The crane had to be repaired during the busy season rather than during the slacker times of the year, and in a rather curious finding, the court held the measure of damages to be the difference between the loss of profits during the time when the crane was inoperative and the loss of profits had the crane been out of use during the off-season. But in a powerful dissent [48], Laskin J. stated that in his view the manufacturer should incur liability in tort both for the cost of repair and the loss of profits[49] already given.

> "The case is not one where a manufactured product proves to be merely defective (in short, where it has not met promised expectations), but rather one

> whereby reason of the defect there is a forseeable risk of physical harm from its use and where the alert avoidance of such harm gives rise to economic loss. Prevention of threatened harm resulting directly in economic loss should not be treated differently from post-injury cure." [50]

Moreover, Lord Denning has remarked, albeit obiter, in Dutton v Bognor Regis UDC[51] that the manufacturer ought to be liable for the cost of repair of a defect discovered in time to prevent injury. Thus, there is a steady stream of dicta supporting the recovery of economic loss comprising the expenditure necessary to make a product safe in the sense of removing its threat to person or property [52].

One of the key issues underlying the question of liability is whether the defect actually does pose a threat to person or property. In many of the defective premises cases [53] the dangers were self evident, but it is likely that in products cases this matter will less easily be determined. What for example of the motor car with the defective component which will cause a danger if the car is used? If the user discovers the problem and so does not use the vehicle there will be no threat to person or property, and hence no recovery. If he does use the car in the knowledge that it is dangerous, assuming that this can be proved, he will find arguments such as contributory negligence advanced

against him. It might be argued that the appropriate principle here is that damages will be recoverable on the basis that the product if used is dangerous. Alternatively, and this is more in consonance with the general judicial approaches to such issues, a more imminent threat of danger could be required.

Similarly, suppose that a car seat belt is defective. Prior to starting the car the driver finds that the seat belt mechanism does not work and thus that the belt does not lock. Do we here have a shoddy product and hence no tortious or delictual recovery or have we a danger to person or property, enabling a damages claim to sound against the manufacturer concurrently in contract and in tort/delict? It is suggested that current judicial thinking would cause the lack of imminence of the danger to point to liability in contract only.

Although not directly vouched by authority, it seems clear that economic loss, such as loss of profits, which is consequential upon the need to remedy dangerous defects is recoverable on the same principles as stated earlier in the context of damage to property.

The principle that only persons with a proprietary or possessory right in property can sue in respect of damage to the property, applies with equal force to both the cost of removing dangers and to consequential

economic losses.

(c) Damage to the defective product itself.

It would seem that the logical way to approach the question of damage to the defective product itself is to treat it not simply as another form of physical damage to property, but rather to ask the question of whether damage was caused or threatened by a dangerous defect in the product. This would allow the criteria already discussed to be used as a means of drawing the line between recovery and non-recovery. It would also preserve the apparent distinction between tort or delict as a protection against unsafe products and contract as a protection against safe but shoddy products.[55] Unfortunately, there is a marked lack of Scottish or English authority on this matter, although as will shortly be noticed a number of US decisions involve consideration of the issue. It could also be argued that any damage to the defective product itself is physical damage and hence is recoverable under traditional rules. Support for this line can be drawn from the treatment of the loss in Junior Books as physical damage by the court in Tate & Lyle, supra.,which is consistent with the view of the Lord Ordinary (Grieve), who dealt with the matter at first instance, and who regarded the property damaged by the defenders' alleged negligence as the property supplied by them to the pursuers, that is the upper layer of the

floor laid in the factory.[56]

It could also be asserted that the decision in Junior Books has goes further than the approach favoured in some of the American jurisdictions that for damage to the defective product itself to be recoverable that damage must result from some impact or explosion. [57] Compensation for damage not caused in this way was of course recovered in Junior Books. However, the danger of extrapolating too much from that now rather isolated decision must be avoided, and it is likely that recovery of compensation for loss caused by simple deterioration or shoddiness is possible only in the very limited circumstances in which Junior Books has extended the duty of care.

The traditional line of authority supports the proposition that a danger or actual damage to person or other property is required before recovery of damages in respect of defects in products themselves will be allowed. In his dissenting speech in Junior Books, Lord Brandon perceived as central the distinction between a dangerous product and an unmerchantable one. Speaking of considerations which ought to limit the duty of care, he said:

> "The first consideration is that, in Donoghue v Stevenson itself and in all the numerous cases in which the principle of that decision has been

applied to different but analogous factual situations, it has always been expressly stated, or taken for granted, that an essential ingredient in the cause of action relied on was the existence of danger, or the threat of danger, of physical damage to persons or their property, excluding for this purpose the very piece of property from the defective condition of which such danger, or threat of danger, arises."[58]

Here, his Lordship was clearly confining recovery to those instances in which other property was damaged or threatened. Where the property damaged or threatened by the defect is the product itself, the question of whether the danger created is a danger to other property does not admit of an obvious answer, especially where the danger to the product is caused or threatened by a defective component part. This matter exercised the Court of Appeal in Aswan Engineering Establishment Co. v Lupdine Ltd. (Thurgar Bolle Ltd., third party) [59] Lloyd LJ put the difficulties thus:

" If I buy a defective tyre for my car and it bursts, I can sue the manufacturer of the tyre for damage to the car as well as injury to my person. But what if the tyre was part of the original equipment? Presumably the tyre is other property of the plaintiff, even though the tyre was a component part of the car, and property in the tyre and

property in the car passed simultaneously. Another example, perhaps even closer to the present case, would be if I buy a bottle of wine and find that the wine is undrinkable owing to a defect in the cork. Is the wine other property, so as to enable me to bring an action against the manufacturer of the cork in tort? Suppose the electric motors in Muirhead's case had overheated and damaged the pumps. Would the plaintiff have recovered for physical damage to the pumps as well as the lobsters?"[60]

Commenting that he did not find these questions easy, Lloyd LJ drew attention to the curious lack of English authority on this point, in contrast to America with its more highly developed product liability laws. Having noted the presence of US authority, none of which was cited before the court, Lloyd L.J. concluded, without any real reasons for his view:

"My provisional view is that in all these cases there is damage to other property of the plaintiff, so that the threshold of liability is crossed." [61]

Thus, it is quite clear that damage within a defective product may fit into the category of physical damage to other property. But damage to the defective product itself which cannot be treated as damage to other

property remains beyond recovery in tort/delict. This is borne out by Lloyd L.J.'s view in Aswan [62] that he was

> "assuming in Aswan's favour that the damage was damage to other property, and not a defect in the property itself."

Nicholls LJ, described the argument that there was a distinction between the containers and their contents in the present case as

> "surprising and unattractive, having regard to the nature of the goods, the nature of the defect, and the nature of the damage sustained." [63]

He then gave some examples of situations in which the imposition of liability on the manufacturer of a container would stretch the duty of care "unacceptably far" [64] In his view, where a carrier bag tears open, and the contents, an expensive piece of jewellery, is broken, the imposition of liability on the maker of the bag is unreasonable. He then suggested that it is for the ultimate consumer to satisfy himself that the container is strong enough to hold whatever he wishes to place therein. [65] Although there is some force in this view it is suggested that in these instances there is, very clearly, damage to other property and that the appropriate way to exclude liability would be on

the basis that use of the container for the particular purpose was unforseeable, the losses incurred therefore being too remote.

Proposals for change

Not all of the proposals for change offered comment on the question of recovery of property damage. For example, the Pearson Report was silent on this issue as its terms of reference restricted it to compensation for death or personal injury. The Strasbourg Convention was similarly limited in its application:

Article 3 states that:-

> " The producer shall be liable to pay compensation for death or personal injury caused by a defect in his product".

Paragraph 18 of the explanatory report on the convention explains the reason for this limitation:

> "The committee decided to limit the convention only to damage causing death or personal injuries...It in fact decided that, owing to a lack of time it was not possible to make a thorough study of the questions relating to damage caused to goods which in some respects raised different problems (for example, it was not certain that the definition of

'defect' given in paragraph c of Article 2 could be applied to material damage)...Furthermore, certain experts considered that a convention which introduced a system of strict liability could be more easily ratified by States if it was limited only to damage causing death or personal injuries.... The committee considered that the matter relating to damage caused to goods could, with useful purpose, be dealt with in a separate instrument."

The Law Commisions were able to devote some time to the matter of recoverable damage [66]. It was felt that if the scheme of strict liabiity was to extend to property damage and other types of loss then a number of basic concepts, such as the meaning of defect, the question of contracting out of liability, the imposition of financial limits, the burden of proof and the setting of time limits, would require to be reconsidered, since different considerations were thought to apply depending upon whether property damage and other losses were included. The majority of respondents to the Law Commissions' consultative document who favoured the inclusion of property damage took the view that it should not go beyond personal belongings. The Commissions went on to lay great stress on the question of insurance:

"Provided that the claimant had taken out first

party insurance his new remedy against the producer, in strict liability, would be of no immediate benefit to him but only to his insurers. On the other hand the extra cost to the producer of insuring against third party claims for damage to property would be passed on to the general public in the price of the product. Overall, those members of the public who took out first party insurance would be worse off than under the existing law, as they would be paying the same for their own insurance but would have to pay more for the products. We believe that first party insurance in relation to property ought generally to be encouraged, and we are worried that including property damage in the regime of strict liability would add to the cost of products without a commensurate increase in benefit to the public. We accordingly recommend that strict liability for defective products should provide compensation for personal injury and death, but not for property damage or for other heads of damage, such as pure economic loss. We have considered whether we ought to recommend a small relaxation of our recommendation in respect of personal property, such as clothing damaged at the same time as the personal injury; but difficulties of definition have persuaded us not to do so. Whilst there might be thought to be a strong case for including an injured man's clothing (against damage to which he

> is unlikely to have insured) we can see no way of distinguishing between a wealthy man's shirt and the gold and diamond cufflinks in it. And we are clearly of the opinion that valuables of this sort (which will almost certainly be covered by first party insurance) ought to be excluded."

These arguments did not find favour with those involved in preparing the EEC Directive. From the original version of the Directive, a scheme of strict liability which included compensation for damage to personal property was recommended. The impetus behind this inclusion of certain types of property damage is the Council resolution of 14 April 1975 on a preliminary programme of the European Economic Community for a consumer protection and information policy **[67]**. The professed objective of this resolution is the protection of the economic interests of consumers as well as their health **[68]**. Thus, the Explanatory Memorandum observes that:

> "Limiting the scope of the damage for which compensation must be paid to the economic consequence of death and to personal injury is not possible, since it would not meet the need for an adequate consumer protection system....The scope of the directive therefore also extends to damage to property in so far as this is necessary to protect the interests of consumers, but does not extend to

damage to economic interests in the commercial sphere" [69]

Article 9 contains the the Directive's definition of 'damage':

"For the purposes of Article 1, 'damage' means:
(a) damage caused by death or by personal injuries;
(b) damage to, or destruction of, any item of property other than the defective product itself, with a lower threshold of 550 ECU, provided that the item of property:
(i) is of a type ordinarily intended for private use or consumption,and
(ii) was used by the injured person mainly for his own private use or consumption."

The reasoning behind this provision is given in the Explanatory Memorandum [70]:

"..In deciding whether compensation is to be paid in respect of damage to property, account must be taken of whether the property damaged by the defective product meets the criteria laid down... An objective and a subjective criterion have been used to define the scope of the directive. The damaged property must firstly be of a type normally acquired only for private use or consumption. The term 'private' is used to indicate the activities

of the injured person outside his work or profession. Secondly, a further requirement must be laid down in the form of the subjective purchaser at the moment of purchase or, alternatively, the subjective use at the moment when the damage occurred, likewise aimed at private use and not commercial use or consumption."

The original draft of the directive contained no lower limit on recoverable damage and so no justification for the imposition of a lower limit is given in the Explanatory Report, but the preamble of the final version of the Directive states that:

"Whereas the protection of the consumer requires compensation for death and personal injury as well as compensation for damage to property; whereas the latter should nevertheless be limited to goods for private use or consumption and be subject to deduction of a lower threshold of a fixed amount in order to avoid litigation in an excessive number of cases."[71]

The explanatory report goes on to deal with the crucially difficult point of damage to the defective product itself.[72]

"Claims for compensation in respect of damage to or the destruction of the defective product itself are

excluded. Product damage is damage which is inflicted upon the user or purchaser of a defective article in the form of personal injury or damage to property. The producer of the article is liable in respect of this type of damage. Liability in respect of the quality of a newly purchased article, its fitness for particular purposes, including its freedom from defects in the sense that it will not be damaged or destroyed in its entirety as a result of defects in part of it, is normally governed in the laws of all the Member States by the law relating to the sale of goods. This field is not affected by the directive. If for reasons connected with the protection of consumers the need arises to improve the legal position of a purchaser of a defective article vis-a-vis its seller or to improve his rights of action against the producer, this can be achieved under the legal systems of the Member States in which the need shows itself."

It could be argued, and this point will be taken up later, that the Directive here fails properly to distinguish between damage caused to the defective product itself, and damage caused by a defective component part to the product in which it is comprised. In the latter case , do we have damage to other property, or damage to the defective product since the product in which the defective component part is

comprised will itself be defective through the defectiveness of the component? As we will now see, the purported implementation of these provisions of the Directive in the 1987 Act has raised a number of questions about the application of the rules.

The 1987 Act

The provisions of the Act on recoverable damage are contained in section 5, and in particular in sub-sections (1) - (4). The substantive provisions in the remainder of the section, sub-sections (5) - (7), deal with establishing the date at which damage occurred. These latter provisions do not extend to Scotland but in England are important as regards title to sue, (in that only a person interested in property at the date when it suffers damage has an action), and for establishing the commencement of the running of the limitation period, as well as marking the point at which the question of whether the property was intended for private use or consumption is determined.

Section 5(1) which resembles but does not mirror the provisions in the Directive states:

> "Subject to the following provisions of this section, in this Part "damage" means death or personal injury or any loss of or damage to any property (including land)."

Thus it is clear that purely economic loss is entirely outwith the new scheme of liability, as recommended by the various proposals for change in the law. Damages for pain and suffering would seem to be included [73] The Act makes specific provision for the preservation of the rights of relatives to raise an action, and for the rights of a child to sue in respect of disability suffered by the child as a result of the parent being exposed to the product [74]. This latter remedy will of course be of particular importance where a child while in the womb suffers injury caused by defective drugs supplied to a parent.

The general principle of liability expressed in section 5(1) is then subjected to a number of qualifications, which in particular have the effect of excluding from recovery damage to the defective product itself, including damage to a product caused by a defective component part, and damage to commercial property. Damage to private property is recoverable only if it exceeds £275. The inclusion of damage to land would cover for example damage to damage to soil by a defective weedkiller [75]. These provisions of the Act, although relatively clear as to their general import, create a number of uncertainties, including the important question as to whether the Act properly implements the Directive.In order to explore these points, the provisions of the Act must be stated in full.

Section 5(2) states:

> "A person shall not be liable under section 2 above in respect of any defect in a product for the loss of or any damage to the product itself or for the loss of or any damage to the whole or any part of any product which has been supplied with the product in question comprised in it".

The effect of the provision is clear: damage to the product itself, including damage caused to a product by a component is outwith the Act. It could be argued, however, that the Act derogates from the Directive on this latter point, a derogation not contemplated by the Directive. Some support for this assertion can be found in the preamble to the Directive in which it is stated:

> "Whereas protection of the consumer requires that all producers involved in the production process should be made liable in so far as their finished product, component part or any raw material supplied by them was defective."[76]

It may of course be observed that this statement concerns the general imposition of liability on component producers rather than their liability for damage to the finished product. However Article 9(b) of the Directive lends further aid:

" 'damage' means "damage to, or destruction of,any item of property other than the defective product itself..."

Thus the argument is that damage to a finished product caused by a defective component part is not damage to the defective product itself. Damage to a car caused by a defective battery (to use an example given in the parliamentary debates on this issue) a defective battery, would on a strict interpretation of the wording of the Directive be recoverable as damage to property other than the defective product itself. The effect of such an interpretation would be to allow recovery where, for example, the defective car runs into a wall because of a defective component part. Other product liability regimes seem more prepared to allow recovery in such a situation.[77]

In order to remove this alleged discrepancy between the Act and the directive, an amendment was proposed at the committee stage in the House of Lords.[78] This amendment would have removed the words "or for the the loss of or any damage to the whole or any part of any product which has been supplied with the product in question comprised in it." On behalf of the Government, the Lord Advocate explained why the amendment was to be resisted. Firstly, he stated that this was just one of a number of occasions in which the directive did not fully work out the effect of Article 2 which states

that a product may include a product incorporated in another product. The view of the Government was that the words 'defective product' in Article 9(b) ought:

> "reasonably and rightly to be construed as including any product in which a defective component is comprised"[79]

The Lord Advocate then went on to quote from the Explanatory Memorandum the passage stated above, to the effect that freedom from defects in the sense that a product will not be damaged or destroyed in its entirety as a result of defects in part of it should be governed by the law of sale of goods. He went on to assert that a product which destroys itself is not of merchantable quality and so would be governed by the law which deals with the quality of goods and not their safety.[80] In the light of recent dicta in cases such as Aswan, the Government's view that contract is the appropriate ground for redress is rather simplistic since it fails to take account of the distinction between the defective product and other property.

There is, however, a more major difficulty, in that resolving an ambiguity in the Directive requires reference to the Explanatory Memorandum. This is an extremely unsatisfactory state of affairs; the directive is ambiguous because the term 'defective product' can mean the defective component part or the

main product, which is itself rendered defective by the component. It may be that the Directive as explained by the memorandum authorises the wording of section 5(2), but it is very unfortunate that the memorandum requires also to be considered. The Act implements the sense of the directive rather than its express wording.

At all events, whatever its divergence from the directive, the Act itself is clear. Thus, for example, if a defective motor car blows itself up because of a defective battery, which was supplied comprised within the car, any resultant product liability litigation will not be under the 1987 Act. The precise dividing line between when the Act is attracted and when it is not is of some interest. What is the position for example where the battery is a replacement which damages the car? Here the car has not been "supplied with the product in question comprised in it" and hence the damage to the car will be recoverable, assuming that we have here damage to property other than the defective product itself, and that the other aspects of section 5 are satisfied. The damage to the battery by its own self-destruction will remain outside the scope of the Act.

It was noticed earlier that the directive differed from the Law Commissions' recommendations in that the latter would not have allowed recovery of loss caused by damage to property, whether or not the property was

private. Under section 5 (3) of the 1987 Act, to permit recovery in respect of damage, the property must be of a description ordinarily intended for private use, occupation or consumption; and must be intended by the person suffering the loss mainly for his own private use, occupation or consumption. Again, the broad import of the provision is relatively clear: damage to the paintwork of a private car caused, for example, by a defective washing agent is recoverable under the Act, while the same damage to a company vehicle is not; the personal computer which explodes causing damage to office furniture will require application of the old law, while if furniture at home is damaged, the Act will be applicable.

It is interesting to note that damage to private property includes land, and that the land must satisfy the tests of being ordinarily intended for private use, occupation or consumption, and being intended by the person suffering mainly for such use, occupation or consumption. The use of a word such as 'mainly' in an statute is troublesome; it seems that this term would allow recovery where, for example, a television set is used at work having been taken there from home and is then damaged by a defective cable which has been attached to it. Similarly, loss caused to a car which has a small amount of business use and which is damaged by a defective product is recoverable. Notice also that the product need not yet actually have been used; the

intention to use it privately is enough. It was argued in the House of Lords that the use of 'intention' in this context meant that the provision covered only products intended to be used but not yet actually used [81] It is doubted whether a court would give the provision this very limited construction, although the Act does go further than the Directive here which requires use before there can be liability.[82] This would of course have been an undesirable restriction on the injured person's remedies; if he had bought a product but had not yet used it when it caused the harm the directive would not afford protection.

Section 5(4) goes on to implement the Directive's provision on the £275 figure for minimum loss by damage to property before recovery is possible. However the drawing of such a line is apt to create almost fortuitous results; damage to a portable television worth £270 by a defective fish tank which leaks on to the set is not recoverable, while damage to a set costing just a few pounds more would be recoverable. A provision of this type is of very dubious merit in a statute which purports to protect consumers and their personal property.

Sections 5(5) - 5(7) reproduce the wording of section 3 of the Latent Damage Act 1986, and are designed to fix the date when damage is taken to have occurred in a case where the damage could not initially be

discovered. As noted earlier, these provisions do not apply to Scotland [83] where the matter of limitation, including the case of latent damage, is dealt with in the Prescription and Limitation (Scotland) Act 1973, as amended. [84] In Scots law, therefore, there already exists a concept of discoverability, and a long-stop provision, so that there was no need for a particular statute dealing with latent damage.[85] Prescription and limitation difficulties arising from latent damage are currently under review in Scotland, although the problems which Scots law has encountered on latent damage are of a less fundamental nature than those which in England precipitated the 1986 Act.[86]

Particular problems arise as regards cases in which no harm is yet manifest, but the exposure of the pursuer to a substance (such as asbestos, DES or the AIDS virus) creates a statistical chance of harm, and the fear of the chance becoming reality results in an action for damages. Arguably, costs incurred in medical monitoring will be recoverable under the general law, as in some American cases [87]. It is clear that the fear itself will not constitute damage recoverable under the 1987 Act, probably not even allowable as an aspect of pain and suffering since it is unaccompanied by personal injury. The intriguing difficulties raised by such cases are not peculiar to product liability and are really a problem for the general law. It is tentatively suggested that where fear is based upon a

real statistical chance of harm, damages for the anxiety thereby incurred ought to be recoverable.

As a result of the new regime of liability for product defects, there is then a spectrum of recoverability: at one extreme, where the harm is death or personal injury, liability under the Act will co-exist with current mainly negligence based remedies; at the other end of the scale, pure economic loss remains recoverable, if at all only outwith the new rules. In between, damage of #275 or more caused to personal property attracts potential liability under the Act, while damage to commercial property will be actionable only outwith the regime of the 1987 Act. Damage to the defective product itself is recoverable only under the common law rules, and even then, only if the defect damages, or poses a threat of damage to, person or property, other than the defective item itself.

Since the Act limits recovery to damage to personal property and personal injury, recovery of consequential economic loss, such as loss of profits, is left to the existing rules. Under the general law, compensation for pain, suffering and loss of amenity, generally known as solatium, is of course recoverable. However, the Explanatory Memorandum issued with the draft directive states that

"The term 'personal injuries' comprises the cost of

> treatment and of all expenditure incurred in restoring the injured person to health and any impairment of earning capacity as a result of the personal injury.
>
> The Directive does not include payment of compensation for pain and suffering or for damage not regarded as damage to property (non-material damage). It is therefore possible to award such damages to the extent that national laws recognize such claims, based on other legal grounds."[88]

It would seem ludicrous to suggest that a separate ground of action must be maintained in order to recover solatium, and it is suggested that the above comment be so construed. However, the last five words of the quote are apt to create ambiguity, as this extract from the Law Commissions' report makes clear:

> ".. in the Explanatory Memorandum that accompanies the EEC Directive it is clearly provided that the term "personal injuries" "....does not include payment of compensation for pain and suffering..." If the policy of the Directive is to exclude heads of damage recoverable in the general law of tort or delict we think the policy is undesirable and unjustifiable..."[89]

It is to be expected that courts in the U.K. will take

the view that the 1987 Act permits recovery of such compensation, and it is suggested that it could never have been the intention of the reformers to exclude these damages, despite the apparent contradiction in the Expalanatory Memorandum.

As for causation, section 2(1) makes it clear that the damage must have been caused wholly or partly by a defect in a product. This of course preserves the need to establish a causal connection between defect and loss, but the wording of the provision, which differs again from that in the Directive, would seem to have the effect of imposing liability upon the supplier unless he can point to a novus actus interveniens, which is the sole cause of the loss and which therefore breaks the chain of causation. [90]

Foreseeability of damage within the Act is not required, since all that need be established is that the defect caused the damage. Foreseeability remains important of course as regards consequential loss, and as regards damage outwith the Act.

The American Experience

In the course of the earlier discussion of the American experience it was noted that three major theories of liability can be identified in US product liability

law: negligence; implied warranty; and strict liability in tort. Here, as in earlier chapters, it is chiefly strict liability in tort which is of interest.

A review of the American case law on the issue of recoverable forms of damage reveals, as would be expected, that their courts have had to come to terms with the same kind of problems of categorisation of loss as the courts in the United Kingdom. The Supreme Court has recently had an opportunity to review the area. In East River S.S. Corp. v Delaval Turbine, Inc., [91] an Admiralty case which will be discussed later, three different approaches taken by U.S. courts to the problem of recovery of loss caused by damage to the product itself were identified: the majority approach; the minority approach; and the intermediate approach. The brief review of the U.S cases which follows commences with an overview of these three approaches followed by a more detailed discussion of the issues.

(a) The Majority and Minority Approaches.

Seely v White Motor Company [92] , a case from 1965, was taken by the Supreme Court to be illustrative of the majority view that liability in tort ought not to be imposed in respect of pure economic loss. In that case, damages were sought in respect of property damage and economic loss, including the cost of repair, caused by the defective condition of a vehicle manufactured by

the defendants. Justice Traynor, a pioneer of the strict tort theory of recovery, refused to allow recovery of the repair costs. Recovery of damages in respect of the physical loss would have been permitted, but the plaintiff failed to establish that a defect in the vehicle caused the physical damage [93]. In the course of his judgement in Seely Justice Traynor explained that physical damage to property was so similar to physical damage to person that the law ought not to distinguish between them [94]

Later courts have in the main adopted what has been taken to be the Seely approach - no recovery in strict tort for purely economic loss. Thus, on this basic dichotomy between purely economic loss and damage to property or personal injury, the trend in the US has been towards the same result that has occurred here. Accordingly, strict tort allows recovery of the first head of loss in our list - damage to person or property and economic loss consequential thereon.

In reaching his decision in Seely, Justice Traynor declined to follow the line taken by the New Jersey Supreme Court which had earlier in the year permitted recovery of pure economic loss. In Santor v A.& M. Kargheusian [95], Inc. a carpet manufacturer was held to be strictly liable in tort for defects in a carpet, even the only damage was damage to the product itself. The plaintiff recovered damages amounting to the

difference between what he had paid for the carpet and what it was worth. Santor thus became the progenitor of the minority approach, authorising the proposition that:

> "a manufacturer's duty to make non-defective products encompassed injury to the product itself, whether or not the defect created an unreasonable risk of harm"[96]

Differences of view such as those between Seely and Santor also rendered uncertain the recoverability of the cost of repairing or replacing products so as to remove the danger-threatening aspect of the defect, and financial loss consequent upon the unusability of the product. Many courts have taken the line that tort does not permit recovery for purely economic loss, such as the cost of repair or replacement, in the absence of any physical damage to person or property [97]. For example, in National Crane Corp. v Ohio Steel Tube Co.,[98] recovery in tort was not permitted for replacement costs incurred in order to obviate a threat of potential future physical harm posed by a defective product [99].

(b) The Intermediate Approach.

Othes courts have been willing to adopt a middle course, the intermediate approach, between the

apparent Seely no-recovery rule, and Santor's general recoverability stance. These courts view a product which poses a threat of harm to person or property, and which therefore requires to be repaired or replaced, as being unreasonably dangerous for the purposes of tort recovery [100]. In one of the leading modern decisions in this area, Pennsylvania Glass Sand Corp. v Caterpillar Tractor Co.,[101] it was held that recovery in tort was permissible where a defect exposes persons or property to a risk of physical harm, even though no such harm has actually occurred. A similar approach has been taken in several cases [102] in which recovery of purely economic losses, where no actual damage has been suffered, was permitted on the basis that the product (in some cases asbestos) posed a real risk of physical harm. Given the policy aims of strict liability in tort, which include the protection of the plaintiff from exposure to an unreasonable risk of injury, this so-called intermediate approach is to be preferred.

(c) The Intermediate Approach: A Synthesis.

As has been explained earlier, most States have adopted s402A of the Restatement (Second) of Torts. The seminal decisions in Seely and Santor were made prior to the adoption of s402A, but the section's provisions are of no real value in cases involving dangers posed, but not yet manifested as damage, since the section speaks of liability for physical harm caused by products which

are in a defective condition unreasonably dangerous to the user or consumer or his property.

Section 402A leaves open the further and more troublesome issue of damage to the defective product itself, including damage to a product caused by a defective component part. In Seely, defects in a truck caused it to overturn. However, the refusal of the court to allow recovery of the repair costs was not on the basis that the product itself had been damaged. Rather, the court emphasised the nature of the responsibility which a manufacturer undertakes in distributing his products, and distinguished between risk of physical injury and simple expectation losses. [103] This view is simply a re-affirmation of the safety/ shoddy distinction which many decisions have taken to underpin the tort/contract dichotomy.

The question of damage to the product itself sits on the border between purely economic loss and damage to property. As is relatively common in such a borderline issue, different state courts have taken differing stances on this matter. In some states, courts have been prepared to characterise damage to the defective product itself as property damage and hence to allow recovery [104]. Other courts have taken the view that damage to the product itself is in the realm of pure economic loss. Accordingly, it is only personal injury or damage to other property which is recoverable in

such jurisdictions [105]. Thus, where a helicopter was damaged following a crash, there being no damage to person or other property, the plaintiff could not obtain compensation under a strict tort theory of liability [106]. In Texas, where that case was decided, the court categorised such a loss as a loss of bargain, compensable under a warranty rather than strict tort theory. Similarly, the law in Minnesota refuses to recognise damage to a product by a defective component part as a compensable loss under strict tort [107].

Thus, US decisions show a broad characterisation of damage to the defective product either as purely economic loss, in which case recovery is excluded or as property damage, and so recoverable. However, the simple characterisation of a particular loss caused by damage to the product itself as property damage is not the only requirement for liability. A distinction is drawn between

> "the disappointed users ... and the endangered ones"[108].

Only the latter are afforded a tort action. The approach of the Alaska Supreme Court is illustrative of this dichotomy [109]. In Morrow v New Moon Homes ,Inc. [110] it was argued that a mobile home which had been purchased by the plaintiffs was defective in a number of respects, including that the home had a leaky roof

and cracks in the windows. The loss resulting from these defects, which posed no threat of damage to person or property, were held not to be compensable in tort. In stark contrast, the same court, in another case involving a defective mobile home, allowed recovery:in Cloud v Kit Manufacturing Co.[111] the mobile home was completely destroyed when polyurethane foam carpet padding caught fire. Given the well known dangerous properties of the fumes from burning polyurethane, the court was prepared to accept that there was a risk to persons posed by the defect, and on that basis to depart from the decision in Morrow and hence to permit recovery. Echoing the distinction expressed above, but in rather more colloquial terms, the court viewed the distinction between a "lemon" and a dangerous or unsafe product as crucial. There is a difference, according to the court, between damage which is qualitative, involving gradual deterioration, depreciation or internal breakage [112] and damage resulting from some calamitous event. The view taken in Alaska can be summed up as follows: if a product creates a potentially dangerous situation, posing a threat of harm to person or property, and loss arises as a proximate result of that danger and under dangerous circumstances, then recovery in tort is allowed [113]. The Alasksan court is not alone in making this division, courts in Georgia and Missouri, among others, having reached the same conclusion [114].

A rather more sophisticated treatment of this question, which has come to be termed the intermediate approach, was developed in the leading case of Pennsylvania Glass Sand Corp. v Caterpillar Tractor Co., [115]. Here, rather than focus on the relatively simple point as to whether suddenly accidental loss, as opposed to qualitative deterioration, had occurred, a tripartite approach was taken, which in effect sought to synthesise the criteria developed by other courts. The three factors adduced by the court as requiring examination were: the nature of the defect; the type of risk; and the manner in which the injury arose [116]. The court was anxious to draw the line between contract and tort and stated that the items for which damages are sought, such as repair costs, are not determinative of recovery:

> "Rather, the line between tort and contract must be drawn by analyzing interrelated factors such as the nature of the defect, the type of risk, and the manner in which the injury arose. These factors bear directly on whether the safety-insurance policy of tort law or the expectation-bargain protection policy of warranty law is most applicable to a particular claim."[117]

On an analysis of these factors, the court effectively was able to distinguish the unsafe product from the merely shoddy. As regards the nature of the defect, the

court indicated that quantitative defects ought to be distinguished from qualitative defects. The former create an unreasonable risk of damage to person or property, while the latter entail purely economic losses and create no threat of physical damage to other property or to persons. Thus, recovery is permitted in the case of the former , but not the latter. The second element, the type of risk, also relates to the distinction between risk to safety (of person or property) and risk to the pocket only. Again, risk of the former type created by a defective product is compensable, while the latter is beyond recovery in tort. Finally, the court recognised the calamity or accident criterion, which has been of importance for many other courts. The suddenness, immediacy, violence or calamitous nature of the damage indicates recovery in tort, as distinct from damage which devlops and manifests itself only over a period of time.

This decision is of major interest because it shows a departure from the occurrence of sudden, calamitous or accidental harm as being the sole decisive issue, although such a test remains as part of the threefold inquiry. Decisions illustrative of the way in which these factors militate for or against liability include Bagel v American Honda Motor Co.,[118] where the engine of a motorcycle failed to operate after the engine had been running and while still in the garage of the plaintiff. Applying the tripartite approach, this was

deemed by the court to be pure economic loss, the manner in which the damage occurred being not such as to pose a threat to the safety of person or property.[119]

There is however a major difficulty inherent in a test for liability, especially one which is posited as a means of distinguishing between contract and tort, when that test involves an analyis of interrelated factors. It may even be argued that the separation into three distinct if related elements is itself artificial as the factors are so inextricably connected as not to be amenable to such a division. At all events it is by no means clear what weight is to be given to any particular facet, or indeed whether the absence of one, such as the 'sudden calamity' strand, works to preclude recovery. At best it is suggested that the Pennsylvania Glass criteria can only be taken as the starting point for inquiry, leaving later courts to decide on the relative weight to be given to each factor and the need for the presence of all factors. Indeed, the decision has been said to have "already proved unwieldy in certain fact situations"[120] In some cases [121] the need for a sudden, violent calamity or accident has not been a pre-condition of recovery and hence it can be seen that Pennsylvania Glass ought not to be taken as establishing that all three factors must be present before there can be recovery.

(d) The View of the Supreme Court.

Against this rather uncertain background, the United States Supreme Court has recently, in an Admiralty case, reviewed the law on recovery of purely economic loss including the matter of damage to the defective product itself. The decision is of such authority and interest that it is worth exploring the case in some detail. In East River Steamship Corp. Et Al. v Transamerica Delaval Inc.,[122] four oil-transporting supertankers were constructed by a shipbulding company, which contracted with Delaval to design, manufacture and supervise the installation of the turbines. These turbines, which cost $1.4 million dollars each, were to be the main propulsion units for the vessels. East River chartered one of the tankers, the T.T. Brooklyn, and other operators chartered the three other vessels. In three of the ships an escape of steam from the high pressure turbine was found to have caused damage to other parts of the turbine. The fault was traced to the virtual disintegration of the first stage steam reversing ring. The other vessel was put into service some years after the others and did not suffer from the same defect, which had by then been designed out. However,a further defect, this time in the installation of the astern guardian valve, was identified. So, the charterers of the first three ships sued for the cost of repairing the ships and for income lost while the ships were out of service, arguing that Delaval were

strictly liable in tort. The charterer of the other tanker could not argue that the product itself was defective and instead alleged negligence in installation of the valve. Claims based on contractual warranty were untenable as the limitation period has elapsed.

At first instance, judgment in favour of Delaval's contention that the claims were not cognisable in tort was granted, and this decision was affirmed by the Court of Appeals [123]. That court, under reference to Pennsylvania Glass, held that

> "damage solely to a defective product is actionable in tort if the defect creates an unreasonable risk of harm to persons or property other than the product itself, and harm materialises. Disappointments over the product's quality, on the other hand, are protected by warranty law"[124]

Further, the charterers

> "were dissatisfied with product quality; the defects involved gradual and unnoticed deterioration of the turbines' component parts, and the only risk created was that the turbines would operate at a lower capacity".[125]

For these reasons the court held both the strict tort

and the negligence claims not to be cognisable. However, one judge, Becker J., felt that

> "the exposure of the ship to a severe storm when the ship was unable to operate at full power due to the defective part created an unreasonable risk of harm" [126]

The Supreme Court began by dealing with the "threshold issue" of whether products liability, including strict liability, was incorporated into maritime law, and encountered no real difficulty in answering this question in the affirmative. The court went on to note that as an area of the law, products liability arose from the public policy judgment that people need more protection from the dangers presented by products than the law of warranty currently affords. Seely, supra, was cited as authority for this point. At this stage in the judgment and in preface to the court's decision to affirm the holding of the Court of Appeals, the prime policy aim in this area of the law was identified: the need to keep separate contract and tort. Thus, if the development of product liability adverted to above

> "were allowed to progress too far, contract law would drown in a sea of tort. See G.Gilmore, The Death Of Contract, 87-94 (1974). We must determine whether a commercial product injuring itself is the kind of harm against which public policy requires

manufacturers to protect, independent of any contractual obligation."[127]

In tracing the development of product liability law the court reviewed the history of this area, noting that early decisions such as McPherson v Buick Motor Co.[128] predicated liability on the lack of safety of the product, meaning its danger to health, or to life and limb [129] Later decisions applied the same public policy reason for liability to property damage cases, such cases involving damage so akin to personal injury that the two were to be treated alike [130].

The court noted that the traditional property damage claim involved damage to "other property", and that in the present case there was no such damage: the chief allegations were that "each supertanker's defectively designed turbine components damaged only the turbine itself" [131]. Since each turbine was supplied as an integrated package, each was a single unit. In this context the court cited with approval dicta in Northern Power & Engineering Corp. v Caterpillar Tractor Co.,[132]

"Since all but the very simplest of machines have component parts, [a contrary] holding would require a finding of 'property damage 'in virtually every case in which a product damages itself. Such a holding would eliminate the distinction between

warranty and strict products liability".

Consequently, damage to the product itself ought to sound in contract but not in tort:

> "Obviously, damage to a product itself has certain attributes of a products-liability claim. But the injury suffered - the failure of the product to function properly - is the essence of a warranty action, through which a contracting party can seek to recoup the benefit of its bargain."[133]

The court went on to create the distinction, discussed above, between the majority land-based approach, and the intermediate and minority views. Seely, discussed earlier, was found to be the seminal decision authorising the majority tenet that the imposition of tort liability for purely economic loss is precluded by the need to preserve a proper role for warranty. Santor, also supra, was taken as illustrative of the minority land based approach.

In passing, the court observed [134] that the New Jersey and California Supreme Courts, apparently polarised by these decisions, had each "taken a step in the direction of the other since Santor [New Jersey] and Seely [California]", the former jurisdiction having rejected Santor n the commercial context [135] while the latter had recognised a limited tort-based recovery

for economic loss.[136] Turning to the intermediate view, which permits recovery in certain cases in which a product injures only itself, the three criteria developed in Pennsylvania Glass, supra, were identified- the nature of the defect,the type of risk,and the manner in which the injury arose- as representing that approach. Interestingly, the Court of Appeals in the present case had relied upon this three factor test.

The Supreme Court then rejected both the intermediate and the minority land-based approaches as unsatisfactory:

> "The intermediate positions, which essentially turn on the degree of risk, are too indeterminate to allow manufactureres easily to structure their business behaviour. Nor do we find persuasive a distinction that rests on the manner in which the product is injured"[137].

Going on to recognise that damage may be qualitative in the sense that it results from internal breakdown or gradual deterioration, as opposed to sudden, accidental or calamitous damage the court referred to the decisions in Morrow supra and Cloud supra. This dichotomy was not found to be helpful:

> "But either way since by definition no person or

other property is damaged, the resulting loss is purely economic. Even when the harm to the product itself occurs through an abrupt, accident-like event, the resulting loss due to repair costs, decreased value and lost profits is essentially the failure of the purchaser to receive the benefit of its bargain- traditionally the core concern of contract law....The minority view fails to account for the need to keep products liability and contract law in separate spheres and to maintain a realistic limitation on damages"[138].

Thus, the court held, in an approach which the court took to be similar to that in Seely, that a manufacturer in a commercial relationship has no duty under either a negligence or a strict products-liability theory to prevent a product from injuring itself. This interpretation of Seely is misleading - in that case physical damage to the product itself would have been recovered had the existence of a defect been proved.

Much of the court's reasoning in East River, as has already been noticed, is based on safeguarding the present nature of the contract/tort dichotomy. Accordingly,, it was felt that that in a case such as this the reasons for imposing a tort duty were weak in contrast to the strong reasons for leaving the injured parties to their contractual remedies. The court felt

that the increased cost which the public would have to bear for the price of products if the producer were liable in tort for injury to the product itself were not justified.In addition,

> "damage to a product itself is most naturally understood as a waranty claim. Such damage means simply that the product has not met the customer's expectations, or, in other words, that the customer has recieved 'insufficient product value'" [139]

The maintenance of product value and quality is, in the court's opinion, precisely the function of the express and implied warranties of the law of contract. [140]

In places, the judgement hints that the commercial nature of the transaction in the present case was important as regards the question of recoverability:

> "...the main currents of tort law run in different directions from those of contract and warranty, and the latter seem to us far more appropriate for commercial disputes of the kind involved here.....The expectation damages available in warranty for purely economic loss give a plaintiff the full benefit of its bargain by compensating for lost business opportunities. (see Fuller and Perdue , The Reliance Interest in Contract Damages:1, 46

Yale L.J. 52, 60-63 (1936)." [141]

Having at an earlier point eschewed the Pennsylvania Glass approach the court, perhaps inadvertently, used similar criteria to those in Pennsylvania Glass to justify its non- recoverability decision:

> " Thus, both the nature of the injury and the resulting damages indicate it is more natural to think of injury to a product itself in terms of warranty."[142]

This last point, the difference in the measure of damages in contract as opposed to tort, was developed by the court and is undoubtedly a major reason for disallowing recovery in cases such as the present. The function of tort damages is to compensate the victim, in order to put him in the position he was in prior to the injury. This contrasts with the function of contract damages which is to put the disappointed party in the positiion he would have been in had the other side not broken the contract. Moreover, the rules regarding remoteness of damage are rather more stringent in a contract claim than in a tort action. The twin notions of privity of contract and recoverability only of loss which is forseeable in the sense of being a serious possibility, limit the potental figure in a warranty claim [143]. These notions offer a limitation for the manufacturer which

tort products liability law where potential liability to the public generally is involved, does not possess. Forseeability, in such a situation, "is an inadequate brake".[144]

Again, then floodgates fears were persuasive in restricting recovery of purely economic loss:

> "Permitting recovery for all forseeable claims for purely economic loss could make a manufacturer liable for vast sums." [145]

In the result, the court could find no good reason to extricate the parties from the bargain which they had made, concluding:

> "Thus, whether stated in negligence or strict liability, no products-liability claim lies in admiralty when the only injury claimed is economic loss."[146]

It is difficult to assess the precise impact of this recent decision. On the one hand, it is a decision of the Supreme Court and the tenor of at least certain aspects of the judgement is that uniform rules should apply to commercial and non-commercial plaintiffs, in admiralty or in general product liability. Thus, the intermediate land based approach in Pennsylvania Glass is disparaged as unsatisfactory, as is the minority

view. The policy reasons which the court offers in support of its decision, principally the need to maintain a separation between tort and contract, apply equally well to non- commercial plaintiffs. But it is difficult to imagine that the court sought to overrule Pennsylvania Glass and the cases, cited earlier, in which recovery of economic loss, for example where the product poses a threat to person or property, had been allowed. On the other hand, it could be argued that the decision in its key passages speaks only as regards commercial plaintiffs, or only as regards the admiralty jurisdiction. It may be that in the same way that Junior Books was percieved as being dangerously innovative and hence was restricted by later courts, East River may be viewed as overly conservative and subjected to similar restrictions.

East River has, however , already been applied to defeat claims for damage caused solely to the product. For example, in Shipco 2295,Inc. , et al v Avondale Shipyards, Inc.,and Allgemeine Elektricitats Gasellschaft Telefunken,[147] the United States Court of Appeals for the Fifth Circuit refused claims by charterers for damages in tort for repair costs and loss of profits caused by alleged defects in tankers and in their steering systems. The court took the view that the product in the instant case, as in East River, was each vessel itself:

> "In attempting to identify the product, our analysis leads us to ask what is the object of the contract or bargain that governs the rights of the parties? The completed vessels were obviously the objects of the contract. Shipco.... did not bargain separately for individual components of each vessel. We are persuaded that those same vessels that were the object of the contract must be considered 'the product' rather than the individual components that make up the vessels."[148]

Thus, no 'other property' was damaged. The damages sought by the plaintiffs-appellees were of the same tyoe as that characterised in East River as economic loss:

> "East River teaches that such economic loss to the product bargained for, the vessels in this case, cannot be recovered in tort."[149]

In summary, many courts in the US have adopted the Seely approach, which would exclude recovery of pure economic loss but would permit recovery for damage to the product itself. But a further line is drawn by most courts: harm to property by simple deterioration, or internal breakdown, cannot be recovered; but loss caused by damage to the product which is caused or threatened by a dangerous defect, is recoverable. Other courts, in the minority, allow recovery of pure

economic loss. Conversly, East River is representative of the rather unsubtle view, espoused by another minority, that damage to the product itself even when caused by a defective component part is beyond the reach of tort compensation.

As a common law system, America ostensibly uses a more empirical form of judicial reasoning than civilian systems. However, as is most patently clear from the whole development of product liability at common law, no rigid principle of stare decisis exists in the US [150]. Thus, it is probable that an Admiralty decision, which involved a commercial product, will be of limited persuasive value in other state or federal courts trying cases of manufacturers' liability.

But, at least in admiralty cases involving commercial products, clarity has replaced the relative uncertainty of approaches such as that in Pennsylvania Glass. But do the policy reasons promulgated by the Supreme Court justify its conclusion? And do those same policy reasons indicate non- recoverability in non-commercial product cases?

Before looking at these matters, it is worth noting the treatment of property damage/economic loss of the type discussed here, in federal legislative proposals on product liability. Current proposals for federal legislation - including United States Senate Bill 100 -

which would provide a uniform product liability regime, do not cover loss or damage caused to a product itself[151]. As has been noticed, the trend in state courts is towards recovery of product damage caused or posed by dangerous defects and so the federal proposals involve an important retrenchment. In most of the States which have legislated on product liability, property damage is recoverable and there is no specific exclusion of damage to the product itself [152].

Conclusion

The matter of recoverable damage raises some intriguing questions, not least about the respective roles of contract and tort/delict. At common law, the principles applicable to personal injury, property damage, and consequential loss are relatively clear. These become progressively more uncertain as one looks firstly at the costs of removing the danger, and then at damage to the defective product itself. That there has been insufficient ventilation of the issues is apparent from the tentative views offered by Lloyd L.J. in Aswan, noted earlier. The American experience is instructive. Assuming that a line between recoverable and non-recoverable economic loss is desirable we ought, it is suggested, to draw the line using the 'danger' test: if the defect poses a reasonably imminent threat of damage to person or property, then repair or

replacement costs, and damage caused to the product itself should be recoverable. If no such threat is posed, or merely qualitative deterioration in the product results, recovery should be left to contract remedies.

Some would argue that the 1987 Act is overly conservative in its treatment of this area, but it would have been very surprising for strict liability to be imposed for losses in respect of which recovery at common law is rather uncertain. The further argument that the Act fails to implement the Directive is based on the idea that the Directive itself is clear on the issue; unhappily, this is not the case and again the conservatism shown by Parliament is understandable. If the 'danger' criterion suggested above obtains a sufficient pedigree at common law it would be appropriate to consider its inclusion in a strict liability regime. Such a change would do no real violence to manufacturers and would further the policy aims of strict liability.

A more conservative stance could have been taken, for example by adopting the recommendation of the Law Commissions' that property damage should be outwith recovery. Insurance arguments are pertinent here, but no more germane than as regards recovery in negligence generally. If the encouragement of product safety is a key aim of the new rules, then a division between

personal and property safety is arbitrary and undesirable, and the resulting provisions in the Act are welcome.

After considerable litigation, the majority of US courts had finally reached of a consensus as to the appropriate way to deal with recoverable loss questions. The various approaches, synthesised in Pennsylvania Glass, displayed a quite subtle treatment of the issues, and the resultant separation of unsafe products from the merely shoddy provided a workable solution. East River of course negates this view, and in an overly conservative and profoundly unimaginative decision the Supreme Court refused to accept that a proper role for contract could be preserved without denying all tortious recovery for damage to the product. It is suggested that the analysis used by other courts, for example in Pennsylvania Glass , represents a more subtle and just treatment of the issue.

It might be argued that policy reasons, similar to those which moved the European Commission, indicate a distinction between damage to commercial property and damage to personal property. In contrast, it can be pointed out that no such distinction obtains at common law. If the prime policy aim in product liability is the encouragement of the manufacture of safer products, then the distinction between commercial and non-

commercial property loses its significance. However, it will require further legislation in this country before strict liability for damage to commercial property is included in the regime of strict liability.

The policy aims which moved the Supreme Court in East River primarily concerned the retention of a role for contract law. This is a laudable aim but the court overly emphasised the fear of tort interfering with contract. Product safety ought not to be the subject of contractual bargaining. The appropriate principle is that defects which cause a product to be unsafe as regards person or property, including the product itself, ought to be actionable in tort. There is no compelling reason for limiting such recovery to negligence rather than strict liability, but in the absence of clear common law support for the imposition of liability, the reluctance of the legislators to include it within the new regime is understandable, if mis-concieved.

REFERENCES - Chapter 5

1. See Miller and Lovell , Product Liability, (Butt. 1977) Chapter 16.

2. Section 5(3).

3. Section 14(2) and 14(3) apply only to sales in the course of a business.

4. 1982 S.C. (H.L.) 244.

5. [1983] 2 A.C. 509 at 530

6. See discussion in Cane, United Kingdom Law: Property Damage and Financial Loss, Colston Symposium, 1984.

7. See Cane, Physical Loss, Economic Loss and Products Liability, 95 L.Q.R. 117 for a full discussion of the position as at January 1979.

8. See also Miller and Lovell, op. cit., Chapter 16.

9. See Cane, op. cit. n7 supra, at 120.

10. In particular: Candlewood Navigation Corp. Ltd. v Mitsui O.S.K. Lines Ltd. (The Mineral Transporter) [1986] A.C. 1; Leigh and Sillivan Ltd. v Aliakmon Shipping Co. Ltd. (The Aliakmon) [1986] A.C. 785; Transcontainer Express v Custodian Security Ltd.(Financial Times Oct. 19 1987); The Kapetan Georgis (Financial Times Oct. 15 1987); Nacap Ltd. v Moffat Plant Ltd. 1987 SLT 221; North Scottish Helicopters v United Technologies Corp. 1988 SLT 77; Esso Petroleum Co. Ltd. v Hall Russel Co. Ltd. 1988 SLT 33.

11. Per Slade L.J. in Transcontainer Express v Custodian Security Ltd., Financial Times Oct. 19 1987.

12. [1986] 1 A.C. 785

13. Ibid, at 809

14. Nacap Ltd. v Moffat Plant Ltd. 1987 SLT 221; North Scottish Helicopters v United Technologies Corp. 1988 SLT 77; Esso Petroleum Co. Ltd. v Hall Russel Co. Ltd. 1988 SLT 33.

15. 1988 SLT 77. The claim failed on the basis that there had been no negligence.

16. Financial Times Oct. 19 1987.

17. Per Lord Fraser in Candlewood Navigation Corp. v

Mitsui O.S.K. Lines Ltd. (The Mineral Transporter) [1986] A.C. 1 at 25.

18. Such as Caltex Oil (Australia) Pty. Ltd. v Dredge Willemstad (1976) C.L.R. 529

19. [1982] A.C. 225

20. At 278.

21. [1986] A.C. 785

22. [1986] A.C. 1

23. Financial Times Oct. 15 1987

24. [1982] A.C. 225

25. See remarks of Lord Roskill in Junior Books v The Veitchi Co. 1982 S.C. (H.L.) 244 at 276, where he spoke of the "somewhat artificial distinction between physical and economic or financial loss when the two sometimes go together and sometimes do not - it is sometimes overlooked that virtually all damage including physical damage is in one sense financial or economic for it is compensated by an award of damages...."

26. [1985] 3 W.L.R. 993, 3 All E.R. 705

27. [1973] Q.B. 27

28. [1985] 3 All E.R. 705, 719

29. Per Lord Denning M.R. in S.C.M. (United Kingdom) Ltd. v W.J. Whittal and Son Ltd. [1971] 1 Q.B. 337, at 346

30. Ibid, per Winn L.J. at 352

31. Per Lawton L.J. in Spartan Steel & Alloys Ltd. v Martin & Co. (Contractors) Ltd. [1973] Q.B. 27, at 39.

32. Cane, Physical Loss, Economic Loss and Products Liability, 95 L.Q.R. 117, at 120

33. S.C.M. v Whittal, n29 above, at p346

34. Pragmatic considerations have been influential in recent decisions, see e.g. Robert Goff L.J. in Muirhead v Industrial Tank Specialities [1985] 3 All E.R. 705, 715; Lord Brandon in The Aliakmon [1986] 1 A.C. 785, 817; Lord Fraser in The Mineral Transporter [1986] 1 A.C. 1, 25. See also, Jones, Economic Loss- A Return To Pragmatism, 102 L.Q.R. 13.

35. McGregor on Damages, 14th edit., (Sweet and Maxwell 1980) at para. 50.; see also Kerr v Earl of Orkney (1857) 20 D. 298, Reavis v Clan Line Steamers 1926 S.C. 215.

36. In Aswan Engineering v Lupdine Ltd. [1987] 1 All E.R. 135, at 152, Lloyd L.J. stated that the plaintiff in Muirhead was not entitled to recover loss of profit on the operation as a whole, since such loss was purely economic loss.

37. [1985] 3 All E.R. 715, at 720

38. 1982 S.C (H.L.) 244 at 278.

39. In his speech, Lord Fraser stated that the case was decided 'strictly on its own facts': 1982 S.C. (H.L.) 244 at 265.

40. (1932) S.C. (H.L.) 31

41. [1978] A.C. 728. See also Dutton v Bognor Regis United Building Co. Ltd. [1972] 1 Q.B. 373.

42. See discussion in Cane, op. cit. 95 L.Q.R. 117, at 126

43. [1978] Q.B. 554

44. See Cane, op. cit. 95 L.Q.R. 117, at 127

45. 1982 S.C. (H.L.) 244, at 266-8.

46. Ibid, at 274-5.

47. (1974) 40 D.L.R. (3d.) 530

48. Per Lord Roskill in Junior Books v The Veitchi Co. 1982 S.C. (H.L.) 244 at 275.

49. It is difficult to understand why Laskin J. did not find liability for all loss of profits: see Cane 95 L.Q.R. 117, at 138

50. (1974) 40 D.L.R. (3d.) 530, at 551-2*

51. [1972] 1 Q.B. 373, at 396.

52. Nevertheless, it is important to notice that the majority in Rivtow held that a manufacturer would not in general be liable in tort to an ultimate user or consumer for the cost of repairing a dangerously defective article or for the economic loss sustained as a result of the need to effect repairs: per Lord Fraser in Candlewood Navigation Corp. Ltd. v Mitsui O.S.K.

Lines Ltd. (The Mineral Transporter) [1986] 1 A.C. 1, at 23

53. Principally, Dutton, supra, n41; Anns v Merton L.B.C. [1978] A.C. 728; Batty v Metropolitan Property Realisations Ltd. [1978] Q.B. 554.

54. Cases cited at n10, supra.

55. This dichotomy is discussed by the Law Commissions in Part VI of Memorandum No. 20.

56. Muirhead v Industrial Tank Specialities [1985] 3 All E.R. 705, per Robert Goff L.J. at 714

57. See Miller and Lovell, op. cit., at 328-344

58. 1982 S.C. (H.L.) 244 at 282.

59. [1987] 1 All E.R. 135

60. Ibid, at 152

61. Ibid.

62. Ibid, at 154

63. Ibid, at 158

64. Ibid, at 159

65. Ibid.

66. See paras. 117-121, Liability for Defective Products, Cmnd. 6831 (1978)

67. O.J. C. of 25.4.1975

68. Explanatory Memorandum para. 18

69. Ibid.

70. Para. 19.

71. Preamble to Directive (85/374/EEC)

72. Para. 20

73. See Article 9 of the Directive.

74. See section 6

75. See Blaikie, Product Liability: The Consumer Protection Act 1987 (Part 1), 32 J.L.S.S. 325.

76. Preamble to Directive (85/374/EEC)

77. For example, the Ontario Law Reform Commission Report on Product Liability, at p84, would permit recovery in certain situations.

78. Official Report, Fifth Series, Lords, Vol.483, col. 877.

79. Ibid, col. 879

80. Ibid.

81. Ibid, col. 889

82. Article 9

83. Section 5(8)

84. By Schedule 1, Part II, para.8 of the Consumer Protection Act 1987

85. At the time of writing, the Scottish Law Commission is reviewing the law on prescription and limitation in cases involving latent damage: Consultative Memorandum no. 74 - Prescription and Limitation of Actions (Latent Damage).

86. Ibid, at 10

87. See Phillips, The Status of Product Liability Law in the United States of America, Conference Paper presented to SPTL Colloquium, Sept. 1984, at 7-8.

88. Explanatory Memorandum para. 17. This memorandum is set out in full in the Law Commissions' Report, Cmnd. 6831. (1977)

89. Cmnd. 6831 (1977) para. 133.

90. Merkin, A Guide to the Consumer Protection Act 1987, Financial Training Publications ,1987. The Directive's provisions are contained in Art. 1 and Art. 8.1.

91. 106 S. Ct. 2295 (1986).

92. 45 Cal. Rptr. 17 (1965)

93. 45 Cal. Rptr. 17 at 24

94. Ibid.

95. Santor v A & M Karagheusian, Inc. 207 A.2d. 305, (N.J. 1965)

96. East River, n91 supra, at 2301.

97. See Bellehumeur, Recovery for Economic loss Under a Products Liability Theory: From the Beginning Through the Current Trend, 70 Marq. L.R., 320, in particular, cases cited at n8

98. 213 Neb. 782, 332 N.W. 2d. 39 (1983)

99. For a discussion of cases supporting recovery in such circumstances see Bellehumeur, op. cit.

100. For example, Cinnaminson Township Bd. of Educ. v United States Gypsum Co., 552 F. Supp. 855 (D.N.J. 1982); School Dist. of Lancaster v ASARCO, No. 1414, slip op.,(Philadelphia C.P. Dec. 6 1983); Area Vocational Technical Bd. v National Gypsum Co., No. 119, slip op.(Lancaster C.P. Sept. 7, 1983); Philadelphia National Bank v Dow Chemical Co., 605 F.Supp. 60 (E.D.Pa. 1985)

101. 652 F.2d. 1165, (3d. Cir. 1981)

102. Cases at n100, supra.

103. Seely, n92 supra, at 23

104. See e.g Bagel v American Honda Motor Co., 132 Ill. App. 3d. 82, 477 N.E. 2d. 253 (1983); Vulcan Materials v Driltech, Inc. 251 Ga. 383, 306 S.E. 2d. 253 (1983); Corporate Air Fleet, Inc. v Gates Learjet, Inc., 576 F.Supp. 1076 (M.D. Tenn. 1984); Pennsylvania Glass Sand Corp. v Caterpillar Tractor Co., 652 F.2d. 1165 (3d. Cir. 1981).

105. See discussion in Bellehumeur, op. cit.

106. James v Bell Helicopter Co., 715 F.2d. 166 (5th Cir. 1983).

107. See e.g. American Home Assurance Co. v Major Tool & Machine, Inc., 767 F.2d.446 (8th Cir. 1985)

108. Russel v Ford Motor Co., 281 Ore. 587, 595 (1978)

109. See discussion of these cases in Bellehumeur, op. cit., at 332 et. seq., and in East River Steamship Corp. Et Al. v Transamerica Delaval, Inc. 106 S. Ct. 2295 (1986)

110. 548 P.2d. 279 (Alaska 1976)

111. 563 P.2d. 248 (Alaska 1977)

112. See discussion in East River, supra, n91.

113. See Northern Power and Engineering Corp. v Caterpillar Tractor Co., 623 P.2d. 324, 329 (1981).

114. See Vulcan Materials Co. v Driltech, Inc., 251 Ga. 383, 306 S.E. 2d. 353 (1983); City of Clayton v Gruman Emergency Products, Inc., 576 F.Supp. 1122 (E.D. Mo. 1983).

115. 652 F.2d. 1165 (3d. Cir. 1981)

116. East River, supra, n91, at 2302.

117. Pennsylvania Glass, supra, n115 at 1173.

118. 132 Ill. App. 3d. 82, 477 N.E. 2d. 54 (1985)

119. See also City of Clayton v Gruman Emergency products, Inc., 576 F.Supp. 1122 (E.D. Mo. 1983)

120. See also, Bellehumeur, op. cit., at 337

121. See cases cited at n100 supra.

121. 106 S. Ct. 2295 (1986)

123. East River S.S. Corp. v Delaval Turbine, Inc., 752 F.2d. 903 (1985)

124. Ibid, at 908

125. Ibid, at 909

126. East River, n91 supra, at 2297.

127. Ibid, at 2300.

128. 217 N.Y. 382, 111 N.E. 1051 (1916)

129. See also Escola v Coca Cola Bottling Co., 24 Cal. 2d. 453, 150 P.2d. 436 (1944)

130. Per Chief Justice Traynor in Seely v White Motor Co., 63 Cal 2d. 9, 19, 403 P.2d. 145, 152 (1965)

131. East River, n91 supra, at 2300.

132. 623 P.2d. 324, 330 (Alaska 1981)

133. East River, n91 supra, at 2300.

134. Ibid, at 2301.

135. Spring Motors Distributors, Inc., v Ford Motor Co., 98 N.J. 579, 489 A.2d. 672

136. J'Aire Corp. v Gregory, 24 Cal. 3d. 799, 598 P.2d.60 (1979)

137. East River, n91 at 2302.

138. Ibid.

139. Ibid, at 2303.

140. See U.C.C.2-313 - 2-315

141. East River, n91 supra, at 2304.

142. Ibid.

143. See Hadley v Baxendale 9 Ex. 341 (1854)

144. East River, n91 supra, at 2304.

145. Ibid.

146. Ibid, at 2305.

147. 825 F.2d.925 (1987)

148. Ibid, at 928.

149. Ibid, at 929.

150. See Berman and Greiner, The Nature and Functions of Law, The Foundation Press, Inc., (4th edit. 1980) at 587.

151. See for example, S. 666, 100th Cong., 1st Sess. @ 102 (a) (9) (1987)

152. See: ALA. CODE @6-5-521 (a) (1979); ARIZ. REV. STAT. ANN. @ 12-681 (3) (1978); ARK. STAT. ANN. @ 34-2812 (e) (1979); COLO. REV. STAT. @ 13-21-401 (1977); CONN. GEN. STAT› @ 52-572m (d) (1983); IND. CODE. ANN. @ 33-1-1.5-2 (West 1983); KY. REV. STAT. ANN. @ 411-300 (1) (Bobbs-Merrill 1978); MICH. COMP. LAWS ANN. @ 600.2945 (West 1978); NEB. REV. STAT. @ 25-21,180 (1978); N.C. GEN. STAT. @99B-1 (3) (1979); OR. REV. STAT. @ 30.900 (1977); R.I. GEN. LAWS @9-1-32 (1) (1978); S.C. CODE ANN. @ 15-73-10 (Law Co-op. 1974); TENN. CODE ANN.@ 29-28-102 (6) (1978); UTAH CODE ANN. @ 78-15-6 (1953).

CHAPTER 6

NON-RECOVERABLE LOSS

The limits of liability for purely economic loss, both in the context of product liability and in the wider sphere, have long taxed the imagination of courts and commentators. It is generally agreed that such liability should narrowly be restricted but the precise nature and extent of the restriction, and the theoretical justifications, if any, for it, have been hotly debated.[1] This chapter will not seek to trace the history of this area of delict/tort law; rather,the discussion will focus upon a series of recent decisions.[2] in which the question of recovery for purely economic loss has been argued. The celebrated decision of the House of Lords in Junior Books v The Veitchi Company[3] will be the starting point for our enquiry.

Much has been written about Junior Books, and its effect upon the law as to recovery of economic loss.[4] However, these analyses have, in the main, discussed the impact of the decision and the cases which have since been decided, in the context of pure economic loss in general. This chapter deals primarily with the

loss in general. This chapter deals primarily with the question of recovery of pure economic loss in the particular context of product liability law. In the course of the discussion, some comment will be offered upon two of the most compelling themes in the development of the law on economic loss, each germane to the area of product liability: the current status of the contract/delict dichotomy; and the parallels which exist between purely economic loss flowing from negligent acts and such loss flowing from negligent statements. Proposals for change to a system of strict liability will be considered and the experience of United States product liability law briefly reviewed.

It will be argued that the current treatment of economic loss is lacking in sophistication, causing the law to be overly restrictive. In particular, it will be contended that there are no compelling reasons of principle or policy for precluding the recovery, by a consumer from a manufacturer, for pure economic loss caused by defects in a consumer product. Different considerations apply to such loss caused by commercial products, warranting the current non-recovery rule.

Economic and utilitarian techniques have become fashionable in the analysis of economic loss problems, and there is no doubt that some light has been cast on the operation of the law by such methods.[5] However, as is particularly clear from the series of recent

decisions adverted to above, these techniques have not been used by UK courts. Accordingly, since the treatment given here is based largely upon an analysis of judicial decisions, to employ such techniques would distort the enquiry. Moreover, as Stanton notes [6], a linguistic decisional model must be preferred, given the understandable reluctance of UK courts to wrestle with abstractions or equations.

Present legal position

(i) The decision in Junior Books.

The distinction between physical loss and economic loss is beset with problems of definition.[7] These are exacerbated by the inconclusive use of terminology by the courts. As was made clear in the last chapter, economic loss can be split into a number of forms [8] including purely economic loss (where there is no damage or threat of damage to person or property) and damage to the defective product itself. Physical damage, or the threat of physical damage, to the product itself has already been discussed.[9] Damage to the product itself which is purely qualitative in the sense of involving internal breakage or deterioration is included in the current discussion.

Economic loss which is pure in the sense of not being attributable to physical injury, or the threat of such

injury, to the victim's person or property has rarely been the subject of a successful legal action.[10] A general rule of no liability prevailed. However, in some cases, notably in the field of negligent mis-statements, a less restrictive view came to be adopted.[11] While the House of Lords in Junior Books' recognised a limited recovery of purely economic loss consequent upon negligent acts, there was a move away from the Hedley Byrne[12] special relationship test towards a simple forseeability criterion in respect of liability for negligent mis-statements.[13] This parallel development will be dealt with later.

The assumed facts of Junior Books were that Veitchi, specialist sub-contractors in the laying of flooring, mixed and laid a composition floor in the pursuers' factory at Grangemouth. The pursuers averred that the flooring was defective, as a result of bad materials or bad workmanship, or both. There was no allegation that the floor posed a threat to the safety of persons or property. The pursuers claimed damages in delict for the cost of remedying the alleged defects and for consequential financial loss. This claim was successful both before the Lord Ordinary and the Second Division[14]; Veitchi appealed to the House of Lords.

For a diversity of reasons,[15] four out of the five Law Lords dismissed the appeal. While agreeing that a duty of care was owed, Lord Brandon in dissenting felt

that considerations of policy ought to limit the scope of the duty of care in the circumstances of the case.[16]

In reaching his decision, Lord Roskill (with whose speech both Lord Fraser and Lord Russell agreed) applied the now familiar bipartite test for existence of a duty of care espoused by Lord Wilberforce in Anns v Merton London Borough Council[17]:

> "Through the trilogy of cases in this House, Donoghue v Stevenson [1932] AC 562, [1932] All ER Rep. 1, Hedley Byrne & Co. Ltd. v Heller & Partners Ltd. [1963] 2 All ER 575, [1964] AC 465 and Home Office v Dorset Yacht Co. Ltd. [1970] 2 All ER 294, [1970] AC 1004, the position has now been reached that in order to establish that a duty of care arises in a particular situation, it is not necessary to bring the facts of that situaion within those of previous situations in which a duty of care has been held to exist. Rather the question has to be approached in two stages. First one has to ask whether, as between the alleged wrongdoer and the person who has suffered damage there is a sufficient relationship of proximity or neighbourhood such that, in the reasonable contemplation of the former, carelessness on his part may be likely to cause damage to the latter, in which case a prima facie duty of care arises.

> Secondly, if the first question is answered affirmatively, it is necessary to consider whether there are any considerations which ought to negative, or to reduce or limit the scope of the duty or the class of person to whom it is owed or the damages to which a breach of it may give rise...."

Nevertheless, the extent to which pure economic loss is recoverable as a result of the decision in Junior Books is very limited, since their Lordships interpreted proximity, the first part of the Anns' formula, restrictively [18] in the sense that it was not taken to mean simple foreseeability but was used in a much more limited fashion. This restricted meaning of proximity is of crucial importance in the rationes of the majority. However, with the exception of Lord Brandon, their Lordships then had difficulty in identifying policy factors which should limit the duty of care[19]. Lord Roskill stated:

> "I then turn to Lord Wilberforce's second proposition. On the facts I have just stated, I see nothing whatever to to restrict the duty of care arising from the proximity of which I have spoken."

So, the restrictive nature of the decision results from

the particular use of the concept of proximity rather from the use of considerations of policy at the second stage in the Anns' test.Where such proximity is absent, no prima facie duty of care will arise.

Proximity and policy are considered in more detail later, but it is worth observing here that the tenor of the dicta in the House of Lords on proximity has led one of the leading commentators on product liability law to conclude that no significant extension to the law was made by the case.[20] Lord Roskill noted [21] several distinctive features which gave rise to the requisite degree of 'proximity' including: the knowledge of the flooring trade and of the factory owner's requirements which the sub-contractor had; the reliance placed by the factory owner upon this skill and experience; and that the relationship between the parties was as close as it could be short of actual privity of contract.

Lord Fraser also emphasised this close proximity between the parties, and was of the view, as was Lord Roskill, that this close party proximity would not be found in the typical manufacturer - consumer relationship. A key element in Lord Roskill's view that the manufacturer - consumer relationship did not involve a sufficient degree of proximity to give rise to liability for purely economic loss was the absence of reliance by the consumer. But this observation is

open to the criticism that there is reliance in such circumstances.[22] Clearly, many customers rely heavily on manufacturers' advertising and representations. Thus, it can still be argued that Junior Books creates a tortious or delictual warranty of merchantability where there is sufficient proximity and reliance between the parties.

Thus, for a variety of reasons the majority in Junior Books was happy to reject the notion that the pursuer's claim for damages should fail merely because hitherto recovery for purely economic loss had not been allowed. Further, the majority appeared to reject the distinction between foreseeable financial loss resulting from injury or physical damage and foreseeable financial loss unaccompanied by injury or physical damage. As Lord Devlin had noted in Hedley Byrne,[23] the distinction between physical loss and financial loss is based on 'neither logic nor common sense.' Accordingly, Junior Books seemed to signal the demise of the arbitrary and anomaly-creating physical loss/danger criterion for the recovery of consequential financial loss. Therefore, given this apparent rejection of the physical loss/danger test and the fact that consumers do rely upon manufacturers, the way appeared to be open for a purely economic loss product liability claim, by a consumer against the manufacturer, if the hurdle of proximity could be passed.

Indeed, Junior Books, with its stamp of seminality, at first appeared to have opened the doors to a variety of claims for purely economic losses being recoverable. [24] But the extension of the duty of care apparently achieved by the decision has so far been relatively unexplored. When faced with the inevitable series of claims seeking to take advantage of the apparent relaxation in the rules for recovery wrought by Junior Books, the appellate courts have adopted an extremely cautious approach.[25] Their decisions have evidenced not only a reluctance to take advantage of the bridgehead laid down in the case, but, rather, there has been a clear retrenchment to the traditional conservative principle of non-recovery for purely economic loss.

(ii) Developments after Junior Books.

(a) The general retrenchment from Anns

Lord Wilberforce's bipartite formula for the existence of a duty of care had breathed new life into Donoghue v Stevenson [26]principles and regenerated their expansionary zeal. However, the Wilberforce test, [27] has of late come in for some criticism. As was mistakenly first thought of Junior Books, it seems to have created too many opportunities for exploitation, and the Judicial Committee as currently constituted is not in the mood for further expansions in negligence

liability.

In particular, the view of Lord Keith of Kinkel in Governors of the Peabody Donation Fund v Sir Lindsay Parkinson & Co. Ltd. [28] that there is a need to resist the temptation to treat the Wilberforce formula as being of a definitive character, has been approved in later decisions [29] Further, in The Aliakmon,[30] Lord Brandon said of the the Wilberforce test:

> "...That passage does not provide , and cannot in my view have been intended by Lord Wilberforce to provide, a universally applicable test of the existence and scope of a duty of care in the law of negligence".[31]

His Lordship said that the Anns test was the correct approach

> "in a novel type of factual situation which was not analogous to any factual situation in which the existence of such a duty had already been held to exist. He [Lord Wilberforce] was not, as I understand the passage, suggesting that the same approach should be adopted to the existence of a duty of care in a factual situation in which the existence of such a duty had repeatedly been held not to exist"[32].

More recently the House of Lords has stated that:

> "for the future it should be recognised that the two stage test in Anns is not to be regarded as in all circumstances a suitable guide to the existence of a duty of care."[33]

Taken together with Lord Keith's warning, noted earlier, that the Wilberforce formula should not be treated as definitive in character these views are indicative of the present conservatism of the Judicial Committee.

Nonetheless, the Wilberforce test resulted in recovery for nervous shock to fall to the foreseeability camp [34] and until Junior Books, purely economic loss remained as one of the final bastions. That particular citadel has suffered only a very minor breach.

(b) The particular retrenchment from Junior Books.

As has already been indicated, the five or so years which have elapsed since the decision in Junior Books has been a time of retrenchment in which the courts have endorsed the more traditional view of the scope of recovery for purely economic loss and have isolated Junior Books to its own special facts, just as in negligence generally a period of conservatism has followed one of liberal expansion. In a recent Court of

Appeal decision[35] Dillon LJ felt able to say that:

> "My own view of Junior Books is that the speeches of their Lordships have been the subject of so much analysis and discussion, with differing explanations of the basis of the case, that the case cannot now be regarded as a useful pointer to any development of the law, whatever Lord Roskill may have had in mind when he delivered his speech. Indeed, I fnd it difficult to see that future citation from Junior Books could serve any useful purpose." [36]

In an earlier case, Muirhead v Industrial Tank Specialities [37], discussed in the last chapter, Robert Goff LJ considered that the court should treat Junior Books as a case in which, on its own particular facts, there was a very close relationship between the parties leading to liability.[38] Indeed, as we have seen, in the case itself Lord Roskill had discerned that the relationship between the parties was

> "as close ... as it is possible to envisage short of privity of contract".[39]

Moreover, it has been said of two major recent decisions of the Judicial Committee - Candlewood Navigation Corp. v Mitsui O.S.K. Lines Ltd.(The Mineral Transporter)[40] and Leigh and Sillivan Ltd. v Aliakmon

Shipping Co. Ltd.(The Aliakmon) [41] - that they

> "categorically ostracised from the sphere of tort actions for pure economic loss"[42]

Such ostracism is, however, incomplete. In the former case Junior Books was distinguished as "not in point" [43] while in the latter it was regarded as of "no direct help".[44] Nevertheless, these and other decisions dealing principally with what is described as title to sue[45] have reduced the status of Junior Books to a decision turning on its own special facts.

In the product liability context, the most recent pronouncement of the Court of Appeal on recovery for pure economic loss is that in Simaan General Contracting Company v Pilkington Glass Ltd.[46] A contract for the construction of a new building in Abu Dhabi was made between its owner and Simaan as the main contractor. A sub-contractor was engaged for the purpose of installing curtain walling consisting of double glazing units manufactured by Pilkington. These units were found not to be of a uniform shade of green and the owner of the building rejected them. The main contractor sued the manufacturer in tort for the economic loss caused by the goods failing to conform to specification. It was held that the manufacturer owed no duty of care in tort to the main contractor and hence recovery was barred. Junior Books was

distinguished as having been interpreted as involving physical damage, and there was no physical damage in the present claim. The goods were as usable as ever and would not deteriorate. There was no threat of damage to person or property. The variation in colour did not make the goods defective; rather, there had merely been a failure to comply with conditions imposed by the Sale of Goods Act 1979.

According to the court, Simaan's real complaint was that the failure of Pilkington's to supply glass of the correct colour had rendered Simaan's contract with the owner of the buliding less profitable. The law of tort had consistently set its face against this type of claim in this case. The wall was serviceable and merely visually unacceptable. Tort law, it was stated, filled gaps left by other causes of action where the interests of justice so required. Here there was no gap since contractual claims would afford relief further down the chain. The general tenor of the judgments is reminiscent of the approach taken by the US Supreme Court in East River[47] to the effect that a separation between tort and contract remains desirable, and that an award of damages in a case such as Simaan would unreasonably interfere with the terms of the bargain.

Thus, it is clear that the general approach to recovery of purely economic loss is largely affected by

pragmatic considerations [48] such as that

> "it is better that lawyers should be able to tell their clients what the law is, even if they cannot assert any rational justification for its consequences".[49]

Similarly, in Candlewood[50], Lord Fraser justified the general rule, limiting recovery of purely economic loss to persons with a proprietary or possessory title in the property concerned, on the basis that

> "It should enable legal practitioners to advise their clients as to their rights with reasonable certainty..."

This view was echoed by Lord Brandon in The Aliakmon[51]:

> "certainty of the law is of the utmost importance, especially but by no means only, in commercial matters. I therefore think that the general rule , reaffirmed as it has been so recently by the Privy Council in The Mineral Transporter [1986] AC 1, ought to apply to a case like the present one.."

Applying the general rule referred to in these cases, that only a person with a proprietory or possessory right to property at the time of its damage could sue

in respect of that damage, the Bingham L.J. in the Court of Appeal in Simaan stated[52]:

> "If, in contrary to my view, these units can be regarded as damaged at all, the damage (or the defects) would have occurred at the time of manufacture, when they were Pilkington's property. I therefore think that Simaan fail to show any interest in the goods at the time when the damage occurred."

Cases such as Simaan, and indeed the general trend in the decisions cited earlier, indicate quite clearly that the avenues apparently opened up by Junior Books, rather than leading into a new world of liberal recovery of damages for purely economic loss, lead only into a short cul-de-sac. Indeed, in Simaan, Dillon L.J. in remarks quoted earlier sought to exorcise Junior Books altogether.[53]

Thus, it would be very misleading to assert at this time that the way is open for a successful claim by a consumer against a manufacturer for damages for purely economic loss caused by a defective product. This was made absolutely plain by the decision of the Court of Appeal in Muirhead v Industrial Tank Specialities [54] in which it was held that a manufacturer of goods could be liable in negligence for economic loss suffered by the ultimate purchaser provided there was a very close

proximity or relationship between the parties and the ultimate purchaser had placed real reliance upon the manufacturer rather than on the vendor. In Muirhead, as indicated in the last chapter, there was no such proximity or reliance. There was nothing to distinguish the situation of the plaintiff in Muirhead from that of an ordinary purchaser of goods who, having suffered financial loss as a result of a defect in the goods, ought to look to the vendor rather than the ultimate manufacturer to recover damages for purely economic loss. Therefore, a latter day Mrs. Donoghue who receives water instead of ginger beer will still be denied recovery from the manufacturer.

On the other hand, it is clear from dicta in Junior Books [55] and from other decisions [56] that when a defective product is a danger to person or other property, the cost of repairing the defect is recoverable. If replacement is the only method of removing the danger then the full cost is recoverable Where, however, purely economic loss is caused by qualitative defects the loss will in the vast majority of cases be beyond recovery. In the very limited situations of close proximity and real reliance between the parties, Junior Books permits recovery for the fact of defectiveness, and consequential loss. Simaan, however, is illustrative of the general rule: that in the absence of such close proximity and reliance, there can be no recovery for purely qualitative defects or

loss caused thereby. The cases also shows another[57] attempt to interpret Junior Books as involving property damage, but this must stretch the meaning of property damage unacceptably far - in Junior Books itself, Lord Keith made it clear that no damage to property was involved:

> "The appellants did not, in any sense consistent with the ordinary use of language or contemplated by the majority in Donoghue v Stevenson, damage the respondents' property"[58]

B The Contract/Delict Dichotomy after Junior Books

Contractual remedies, protect the parties' expectation interest; the pursuer is compensated for the disappointment which he has suffered relative to the position he could have expected if the contract had been performed properly. In contrast, delictual or tortious remedies are restorative, and protect the status quo interest[59]. Damages in delict/tort seek to place the pursuer in the position he enjoyed before the harm was inflicted. But, it could be argued that this apparent difference between delict/tort and contract can be translated into a similarity in that in each case the remedy is designed to put the injured party into the position he would have been in but for the breach of the obligation,[60] although there may be some circularity in this assertion. Contract law is a

set of power- conferring rules by which parties regulate their relationships; whereas delict/tort law is of the duty-imposing genre.[61]

These observations are well established aspects of the contract/delict dichotomy. However, the idea that delict/tort damages do not protect expectations is misleading, for they can be said to protect the expectation that the status quo would continue. Perhaps the use of the term expectations is being distorted here. Instead we should distinguish between a generalised expectation in the delict/tort context and a particular expectation in the context of contract. Nevertheless, expectations are aroused in the ultimate consumer by the manufacturer having engaged in the production and supply of a product, or more specifically, by his use of advertising and promotional material. Of course, Junior Books does not authorise recovery in delict/tort for the disappointment of these expectations, except in very limited circumstances.

The decision in Junior Books, as refined in the later cases, throws this matter of delictual/tortious protection of expectations sharply into focus. In the case itself, delict/tort could be perceived as protecting the expectation interest. Had the bridgehead apparently established in Junior Books been developed further encroachment into the territory of contract

would have occurred. Thus, shortly after the decision it was argued that a new class of so-called 'proto-contracts' was in the process of being recognised.[62] These gave a neo-contractual right to a non-contracting party in that he was owed a delictual/tortious duty of care that the contract would be fulfilled. In other words he would effectively have a remedy in negligence for economic and other loss caused to him by a breach of a contract between other persons.[63] Such possibilities are of course anathema to those [64] who wish to see contract remain undiluted by effluent from delict/tort. Thus, in cases such as Simaan, far from further expanding the Junior Books ratio, the courts have recently sought to protect the sancticty of contract.

It is a trite observation that contractual obligations are voluntarily undertaken whereas delict/tort obligations are imposed ex lege. But it is important to note that in each case legal regulation is imposed upon some act. This is particularly true in the context of product liability. Remedies in contract for loss caused by defective products flow almost wholly from a set of implied terms which are prima facie imposed by law. Subject to these implied terms, which cannot be excluded in a consumer sale, the parties to the contract fix, by means of the terms of their bargain, the quality standard. But in both contract and in delict/tort someone who supplies a product has imposed

upon him liability for losses caused by defects. It could be argued that recognition of a delictual or tortious warranty of merchantability for the benefit of a person who is not a party to the contract by an extension of the reasoning in Junior Books would simply recognise this similarity in the relationships between consumers and suppliers or manufacturers. [65] Strict liability in delict/tort even for pure economic loss, on this argument, would be a final step in this regularisation since contractual liability is already strict. Proponents of such a view could go on to argue that ultimately the obligation imposed upon the supplier of a defective product (whether he is the manufacturer, retailer or otherwise) ought to be strict liability to supply a product which poses no threat of any form of damage. Whether such an obligation is viewed as contractual or delictual/tortious would be of little moment, since any remaining differences relating to remoteness of damage and limitation periods also could be removed. Needless to say, judicial recognition of such a view is extremely unlikely.

C. Words and Acts

> " Words are more volatile than deeds...they are dangerous and can cause vast financial damage... if the mere hearing or reading of words were held to create proximity, there might be no limit to the persons to whom the speaker or writer would be

liable"[66]

Despite this concern expressed by Lord Pearce in Hedley Byrne, tentative steps have been taken towards establishing forseeability, rather than any more restrictive test, as the criterion for the existence of a duty of care in mis-statements' cases. The vulnerability of the Hedley Byrne 'special relationship' test, and recent developments therefrom, to encroachment by the forseeability criterion arises chiefly from the nebulous and complex way in which these tests have been expressed. These matters will be discussed in more detail later. Here, it is merely observed that Junior Books may have been perceived as being for economic loss liability what Hedley Byrne has proved to be for liability for negligent mis-statements: a stepping stone between no liability and liability based upon reasonable forseeability.

It is worth noticing that the words/acts distinction, like the distinction between economic and other loss, carries with it definitional problems. If an accountant fails to check stock figures given by a managing director and so returns a negligent audit, do we have a negligent act or a mis-statement? Similarly,in the context of product liability, does an inaccurate statement in a textbook cause the book to be a defective product or is it merely a mis-statement; is it judged by negligent acts criteria or by negligent

words criteria? As has been noticed in an earlier chapter it is the view of the government that such a defect would only trigger potential liability for mis-statements and would hence fall outside the new Act, but the matter cannot yet be regarded as free from doubt. Further, where statements made by manufacturers about their products, such as 'colour fast', 'shrinkproof', 'unbreakable' are inaccurate, the problem of the purported distinction between negligent acts and negligent words is again raised. It ought to be observed however that in the normal product liability action questions of mis-statements' liability should not arise since the vast bulk of cases are likely to concern defects in manufacture or design. But, in a few cases the distinction between words and acts will be of significance.

The spectre raised by the famous dictum of Cardozo CJ,[67] that to hold accountants liable in negligence would create liability in an indeterminate amount for an indeterminate time to an indeterminate class, has cast a long shadow upon later decisions on negligent mis-statements and on economic loss cases in general. Despite this "floodgates" fear, some commentators have predicted that the ultimate destination of this area of the law will be liability to all forseeable users of information which contains the mis-statement.[68] Others have given cogent arguments on policy grounds , principally the projected calamitous economic effects

of such liability, which they assert outweigh the equitable basis of the forseability view.[69]

In recent years, judicial opportunities for authoritative clarification of the test of liability for mis-statements have not been taken. For example, in Jeb Fasteners v Marks, Bloom and Co.[70] Woolf J. followed a comprehensive review of the authorities with a rather inexplicit ratio decidendi: the negligent accountants owed a duty to those who could be foreseen as likely to place reasonable reliance on the statements. On appeal[71], the court confined itself, as asked, to consideration of the logical consistency of the judge's reasoning, and did not attempt a clarification of the general law on liability for mis-statements. In the leading Scottish case, Twomax Ltd. v Dickson, McFarlane and Robinson[72] Lord Stewart in the Outer House simply applied the Jeb decision. Clearly, these decisions are of little value as precedents, coming as they do from non-appellate courts. However, they are worth exploring as indicative of the kind of problems facing courts in mis-statement cases.

In Jeb, Woolf J., gives as the appropriate test for the existence of a duty of care the question of whether the defendants knew of, or reasonably should have foreseen, reliance upon the accounts. This "reasonable reliance" test, according to some [73] places the Jeb decision in

the hitherto unoccupied territory between, on the one hand, Hedley Byrne's "special relationship" test and, on the other, reasonable forseeability. On the face of it, such a view seems tenable, but a more rigorous analysis reveals difficulties. The nub of these difficulties can be summed up in the question: does reliance form part of the test for existence of a duty of care or is reliance already inherent in the doctrine of causation?

(i) Reliance as part of the test for the existence of a duty in mis-statements' cases.

In Hedley Byrne, knowledge of likely reliance was the crucial element in establishing a special relationship. Reliance was also an important factor in Jeb; indeed, Woolf J. took the view that

> "the fact of reliance on the statement is sufficient limitation on liability to overcome the danger raised by Cardozo CJ"[74]

The dominant control mechanism in mis-statement cases would thus cease to be the defender's knowledge and would become "reasonable reliance". In applying the two-stage Wilberforce formula from Anns[75] as a test for the existence of a duty of care, the courts have viewed "reliance" either as an important element in satisfying the proximity arm, or as the policy factor

to restrict the scope of the duty. But while it seems that reliance can have a role in determining the existence of a duty of care in a mis-statements case, it could be argued that reliance has very strong links with causation.

(ii) Reliance and causation in mis-statement cases.

As concepts, reliance and causation have a tendency to intertwine; if there has been no reliance on the defective information then liability can be denied on causation grounds. This seems to have been the view of the majority of the Court of Appeal in Jeb, who favoured a uniform approach to the meaning of reliance, perceiving its proper place in the conceptual structure of negligence to be as part of causation rather than existence of duty. Sir Sebag Shaw, in his judgment, stated that:

> "It seems to me , with all respect to the judge,that he fell into a metaphysical trap of his own devising when he separated issues 2 and 4 [reliance and causation] and treated tham as distinct from each other. Issue 4 as defined in the judgement can be translated thus: 'Did the plaintiffs suffer any loss because of the defendant's certification of the inaccurate accounts?' This is merely another way of stating issue 2. It is this analytical over-refinement

which has led to the doubts which have arisen as to the true effect of the judgement"[76]

If this approach is correct, then reliance and causation ought not to be separated and there is no place for reliance in the test for existence of duty, unless somehow it is part of both tests. Arguably, it is fully embraced by the concept of causation. The effect of such reasoning on the Jeb ratio would be to subtract reasonable reliance and so to leave a conventional reasonable forseeability test.

(iii) Reliance in product liability cases.

It could be argued that, as a result of the distinction between information and products, reliance can be a control factor in mis-statement cases but not in products cases. Defective information, which has been relied upon, may have been inter alia, absolutely decisive, or important, or significant, or persuasive , or merely noted, or ignored and discounted. There is a spectrum of shades of reliance. Products, on the other hand, are arguably relied upon only in an operational sense; they are relied upon to be used without causing harm or the threat of harm.. On this argument there is little room for reliance as a control factor in products cases. However, there was some discussion of the relevance of reliance in the speeches in Junior Books, and more recent decisions, notably Muirhead,

have offered further analysis of this point.

In Junior Books, both Lord Roskill [77] and Lord Fraser [78] seem to have regarded reliance as a significant factor. The difficulty with their Lordships' reference to reliance is that they did not go on to explain why reliance is important in a case such as Junior Books.[79] Lord Roskill referred also to the Hedley Byrne decision, a mis-statement case in which, like other such cases, reliance was highly relevant. His Lordship also made reference to what is now s14(3) of the Sale of Goods Act 1979 which provides that reliance upon the seller's skill or judgment is a condition of liability thereunder. It is much more difficult, however, to see how reliance of either of these types is relevant in a situation such as that in Junior Books.[80] It could be said that the pursuer relied upon the defender to install a floor which was not defective. But reliance of that type would not distinguish Junior Books from consumer/manufacturer economic loss claims in general, in which consumers rely upon manufacturers not to produce defective products. However, both Lord Fraser and Lord Roskill made it quite clear that Junior Books ought to be distinguished from such general cases. Thus, Lord Fraser took the view that the very close degree of proximity between the parties distinguished Junior Books from the

"case of producers of goods to be offered for sale to the public" [81]

Similarly, Lord Roskill, speaking of claims by ultimate purchasers against manufacturers in relation to goods purchased under ordinary, everday contracts, said

"it is obvious that in truth the real reliance was on the immediate vendor and not the manufacturer"[82]

Unfortunately, neither made any real attempt to identify the ground of this distinction[83] between reliance in the Junior Books situation and reliance generally. It was precisely this difficulty regarding the use of reliance in Junior Books which prompted Kenneth Jones J. at first instance in Muirhead[84] to conclude that the plaintiff had placed reliance upon the manufacturers and that

.."they must therefore reasonably have foreseen that any user in the United Kingdom would rely on them to ensure the adequacy of their motor.."[85]

In the Court of Appeal, Robert Goff LJ, noting that the case was not run on the basis of negligent statement because of difficulties in proving reliance upon statements made by the defendants, said of Kenneth Jones J.'s observations on reliance[86]:

> "Certainly this was a matter of fundamental importance, and would affect every user of the motors in the United Kingdom. But I find it impossible to differentiate this case from any other case of manufactured goods which, through a fundamental defect, result in financial loss being suffered by an ultimate purchaser who buys them for use in his business and, by reason of the defect, suffers a loss of profits."

It is clear then that reliance is of much less significance in a products case than in a mis-statement case, and that in Junior Books proximity rather than reliance was the key point.It may be suggested that reliance was an important element in establishing sufficient proximity but that suggestion faces the difficulty of differentiating the reliance in Junior Books from reliance in a manufacturer-consumer situation.

Certainly, it could be argued that reliance of the kind referred to in Junior Books is, with all respect to Lord Roskill, present in a claim by a consumer against a manufacturer for pure economic loss. The buyer of consumer goods very often chooses them on the basis of the reputation of the brand and hence relies on the manufacturer rather than the retailer. Manufacturers very commonly stress quality aspects of products in their advertising. It is common for the retailer to say

nothing at all about the quality of the product, the buyer having made up his own mind from other sources including the reputation of and representations by the manufacturer. Reliance here is on the manufacturer.

There may, it is admitted, be more difficulty in satisfying such a reliance requirement in the case of donees, or sub-purchasers, but even here reliance will often be on the maker of the product. More remote sufferers, such as bystanders, would be defeated in economic loss claims by the exclusionary rule from cases such as Candlewood and The Aliakmon.

Finally in this section it is worth commenting in brief on the question of mis-statement liability based upon information given with or about a product. In Lambert v Lewis [87] the towing coupling on a vehicle failed while being used by the owner and this caused the death of another person. The vehicle owner and its manufacturer were held jointly liable, in tort, but the owner successfully sought an indemnity fom the supplier of the coupling under s14 Sale of Goods Act 1979. The supplier tried to pass liability back to the manufacturer by claiming, inter alia, that the manufacturer was liable under the principles enunciated in Hedley Byrne , for negligent mis-statements in his literature. Addressing himself to the question of whether a duty of care arose in these circumstance , Stephenson LJ stated[88]:

> "[We] cannot regard the manufacturer and supplier of an article as putting himself into a special relationship with every distributor who obtains his product and reads what he says or prints about it and so owing him a duty to take reasonable care to give true information or good advice"

Given the decisions in later mis-statement cases there may be some room to doubt this view. It is not clear that a distributor does not reasonably rely on statements made by the manufacturer, and there must be similar doubts about a lack of reliance by a consumer.

In summary, reliance as a control factor would seem to be of little value in product liability cases despite its apparent relevance in Junior Books. In mis-statement cases it is traditionally a major element, but may be more at home in the causation stage of a claim rather than as a control factor for the existence of duty.

D. The Way Forward.

> "It seems to me manifestly fair that any damage caused by negligence should be borne by those responsible for the negligence rather than the innocent who suffered from it."

Lord Salmon's remark in Anns [89] points up what might

be regarded as the justice inherent in the modern expansionary trend in negligence decisions. It contrasts quite starkly with Widgery J's view, ten years earlier in Weller & Co. v Foot and Mouth Disease Research Institute [90]:

> "The world of commerce would come to a halt and ordinary life would become intolerable if the law imposed a duty upon all persons at all times to refrain from any conduct which might forseeably cause detriment to another".

The present position of the law on liability for purely economic loss would seem to be one of some advancement from the latter view, making tentative steps towards, and in the case of some decisions on mis-statements, having almost reached, the former. Given this advancement towards a forseeability criterion in the mis-statement cases, and the - admittedly limited - step taken in Junior Books, how ought the law to deal with purely economic loss product liability cases? Is the pragmatic view that certainty is required tenable on policy grounds? Suppose, for example, that Mrs. Donoghue was given water rather than ginger beer - ought there to be recovery?

It was noticed earlier that recent decisions have created a retrenchment from the liberal application of the two-fold test enunciated in Anns v Merton Borough

Council.[91] In particular, Lord Brandon expressed the view, in The Aliakmon[92], that the test ought to be reserved for novel types of factual situation. Unfortunately, a number of courts have used Anns in precisely the manner in which Lord Brandon suggests it ought not to be used[93]. Indeed, if Lord Brandon's view is right it is difficult to see how the law on economic loss and negligence generally can develop at all. Arguably, one reason why the courts have retreated from the Anns test is that it gives too much scope for expansion of the law - if applied to a case such as that of the hypothetical Mrs. Donoghue a court would have difficulty, as will now be demonstrated, in denying recovery.

(i) The first branch of Anns - proximity

The first requirement of the Anns' test is of course whether

> "as between the alleged wrongdoer and the person who has suffered damage there is a sufficient relationship of proximity or neighbourhood such that, in the reasonable contemplation of the former, carelessness on his part may be likely to cause damsge to the latter - in which case a prima facie duty of care arises".[94]

Is there a sufficient relationship of proximity or

neighbourhood between the consumer of a defective product and its manufacturer? The traditional approach in mis-statement cases, with the probable exception of such as Jeb and Twomax, predicates the existence of a duty on the requirement that the plaintiff must have been identified individually, rather than as belonging to a class, for sufficient degree of proximity or neighbourhood to be established[95]. However, in cases other than those involving liability for mis-statements, the traditional meaning of proximity or neighbourhood is that derived from Lord Atkin's speech in Donoghue v Stevenson [96] Thus, Robert Goff LJ in Muirhead, described proximity as

> "a convenient label to describe a relationship between the parties by virtue of which the defendant can reasonably foresee that his act or omission is liable to cause damage to the plaintiff of the relevant type" [97]

Although the last four words are mildly troublesome, referring it seems to relevant types of plaintiff rather than damage, it is plain from his later comments that the judge did not consider that, for the purpose of establishing a duty of care for the recovery of pure economic loss, that their Lordships in Junior Books were using proximity in this traditional sense:

> "As I see it, Lord Fraser cannot have been

> referring to proximity in the sense I have described; and Lord Roskill, when he spoke of the very close ' relationship' between the parties, must, I think, have had in mind the dealings between the parties which led to the pursuers nominating the defenders, who were specialists in flooring, as sub-contractors to lay the flooring in the factory." [98]

Thus, in Muirhead, the manufacturers were not liable for the pure economic portion of the plaintiff's loss. On a traditional forseeability test there would seem to have been proximity, but

> "there was no 'very close proximity' between the plaintiff and the manufacturers, in the sense that there was no very close relationship between the parties;" [99]

This may be the explanation of the decision in Junior Books and its limited extension of the duty of care. What it means of course is that the proximity requirement varies according to whether the loss is purely economic or not; in mis-statement cases the required proximity may be regarded as the traditional type, with reliance as the controlling factor, coming in at the second stage of the Wilberforce test. In a products case, there is clearly a sufficient degree of proximity in manufacturer-consumer cases generally, but

a very close proximity is required if recovery for pure economic loss is to succeed.

This view undermines the common interpretation of the first branch of the Anns test as requiring proximity in the traditional sense of reasonable forseeability.[100] The consequence of adopting a test based upon close party proximity is a radical restriction of Donoghue v Stevenson principles. Proximity for the purpose of pure economic loss cases is not synonymous with reasonable forseeability. The Anns test, therefore, is not helpful in deciding such cases; no prima facie duty of care arises, because policy reasons - supposedly the second part of the test - intrude into that first part of the test so as to require a wholly different interpretation of proximity. However, as is clear from the mis-statement cases, a restricted proximity requirement is well capable of being expanded towards forseeability, with policy factors (such as reliance in the mis-statement cases) being the control upon floodgates liability.

(ii) The second branch of Anns - Policy

In a consumer against manufacturer pure economic loss claim the first part of the Anns test would be satisfied if the conventional view of proximity was adopted, but is not satisfied, or at least not in the ordinary kind of case, if proximity of the Junior Books

type is demanded.

Let us now consider whether there are

> "any considerations which ought to negative , or to reduce or limit the scope of the duty or the class of person to whom it is owed or the damages to which a breach of it might give rise" [101]

The cases show that a number of considerations have influenced decisions in which purely economic loss has been held not to be recoverable.

(a) The "Floodgates" argument

As a justification for failure to permit recovery for purely economic loss, courts often invoke the floodgates argument, perhaps most succinctly expressed by Cardozo CJ in Ultramares Corporation v Touche [102] noted earlier. In that case, involving accountants' liability, Cardozo CJ was worried that exposure to liability would create

> .. "liability in an indeterminate amount for an indeterminate time to an indeterminate class."

But is this a legitimate fear in the context of product liability? There are, it is suggested, at least two reasons why Cardozo CJ's concerns ought not to

condition our view of whether there should be liability in a manufacturer-consumer case: the influence of his dictum is, arguably, on the wane[103]; in any event, the floodgates fear is simply inapposite in many product liability situations.

Cardozo CJ's comment misleads because it ignores the existing control factors which are built into what might be called the conceptual infrastructure of negligence and which militate against widespread or floodgates liability. The trend in mis-statements cases noted earlier evidences this view - accountants, with whom Cardozo CJ was specifically concerned, are now liable under principles close to those of conventional negligence.

Strong feelings on the floodgates argument were expressed in Junior Books: Lord Fraser said that:

> "The argument appears to me to be unattractive, especially if it leads, as I think it would in this case, to drawing an arbitrary and illogical line just because a line has to be drawn somewhere"[104]

Lord Roskill was similarly dismissive :

> "The history of the development of the law in the last fifty years shows that fears aroused by the "floodgates" argument have been unfounded"[105]

He went on to cite Cooke J in a New Zealand case[106], describing the argument as "specious" and "in terrorem or doctrinaire".

It must be noted, however, that many judges ,including those mentioned above, have indicated that 'floodgates' fears may be an influential policy factor in appropriate cases. For example, in Muirhead v Industrial Tank Specialitoes Ltd.,[107] the court seemed particularly concerned that it should not subject manufacturers to a liability in tort to the ordinary purchaser for fear of widespread liability; and in The Aliakmon, Lord Brandon approved counsel's submission that the policy reason for excluding the duty of care ,in the context of what is sometimes described as title to sue, was

> "to avoid the opening of the floodgates so as to expose a person guilty of want of care to unlimited liability to an indefinite number of other persons..."[108]

These fears are perhaps understandable where there is a prospect of persons who have no proprietary or possessory title suffering economic loss, and the limits on recovery evident from recent cases in this area are justified on floodgates grounds. What cannot be justified on such grounds, it is suggested, is a failure to compensate the ordinary purchaser, or indeed

other user, of defective goods for their failure to match expectations, a liability in respect of which the manufacturer ought already to be insured. Floodgates fears are inappropriate in this context because there are no indeterminates in a finding of liability for purely economic loss caused by a defective product to its owner or possessor, or at least no more than in a personal injury or physical loss case. If our putative Mrs. Donoghue was supplied with water, finding the manufacturer liable would not generate an indeterminate multiplicity of suits, nor would such liability last for an indefinite time or be in respect of an incalculable amount of damages; even if in these circumstances there were thought to be any indeterminates, they are but the same indeterminates which are present in negligence claims generally, and are as amenable to the inherent limiting factors of the rules as to forseeability, causation and remoteness. Similarly, the restriction of recovery to consumer products would limit the consequential loss element of claims.

(b) Reliance

Reliance as a control factor in the second part of Lord Wilberforce's formula is as unlikely to be successful as the attempt to use it as part of proximity discussed earlier. As was noted, reliance has been developed as a control test in mis-statement cases, although even

there it should arguably be considered as a factor in causation. It is even more difficult to see the place of reliance in a products case. Who does one rely upon as regards the quality of a product, the retailer or the manufacturer? As has been argued, many consumers do rely upon the reputation or advertisements or other representations of manufacturers. It can also be contended that there is a passive reliance by consumers upon the manufacturer not to produce a defective article.[109] Reliance is therefore an unconvincing controlling factor at the policy level.

(c) Interference with contract

Perhaps the most cogent of the forces which have restricted the application of pure Donoghue v Stevenson principles in cases where pure economic loss is suffered is the unwillingness of our courts to cross the wires of contract and delict/tort. To give a remedy in respect of such loss would, runs the argument, circumvent privity of contract by giving a delictual or tortious claim for frustrated expectations, and do so in a situation in which product standards could not adequately or accurately be judged.

Before examining this matter it is worth reviewing the way in which these fears have been influential. The fullest exploration of recent times occurred in the American East River[110] decision discussed in the

last chapter. In that case the court was concerned that a holding that damage caused to a product by a component part was recoverable would eliminate the distinction between contract and tort, and pointed out that the injury suffered by the failure of the product to function properly

> "is the essence of a warranty action.."[111]

Dicta in another influential case[112] were cited to the effect that preserving a proper role for the law of warranty precludes imposing tort liability if a defective product causes purely monetary harm. There was a

> "need to keep products liability and contracts law in separate spheres..... Damage to a product itself is most naturally understood as a warranty claim. Such damage means that the product has not met the customer's expectations."[113]

The same fears were expressed by Lord Brandon when he identified considerations which ought to limit the duty of care, in his dissent in Junior Books:

> "The first consideration is that, in Donoghue v Stevenson itself, and in all the numerous cases in which the principle of that decision has been applied to different but analogous factual

situations , it has always been either stated expressly, or taken for granted, that an essential ingredient in the cause of action relied on was the existence of danger, or the threat of danger, of physical damage to persons or their property, excluding for this purpose the very piece of property from the defective condition of which such danger, or threat of danger, arises. To dispense with that essential ingredient in a cause of action of the kind concerned in the present case would, in my view, involve a radical departure from long established authority.....The effect of accepting the pursuers' contention with regard to the scope of the duty of care involved would be, in substance, to create, as between two persons who are not in any contractual relationship with each other, obligations of one of those two persons to the other which are only really appropriate as between persons who do have such a relationship between them."[114]

Similar concerns as to the role of contract moved the court in Simaan, supra, where Bingham L.J., speaking of the possible presence of conditions in the contract between the supplier and the sub-contractor, and their effect upon any duty of care owed to the main contractor, said:

"But if the duty is unaffected by the conditions on

which the seller supplied the goods, it was unfair to him and made a mockery of contractual negotiation."[115]

Thus, in that case, the court held it not to be just and reasonable to impose a duty of care on the glass manufacturer, stating that any claims could have been pursued down the contractual chain. On like grounds, the court in Muirhead asserted that the plaintiff ought to look to the immediate vendor rather than the producer.[116]

There have, however, been powerful arguments on the other side. In Junior Books, Lord Roskill disparaged the privity argument in the following terms:

"It was powerfully urged on behalf of the appellants that were your Lordships so as to extend the law a pursuer in the position of the pursuer in Donoghue v Stevenson could in addition to recovering for any personal injury suffered have also recovered for the diminished value of the offending bottle of ginger beer. Any remedy of that kind it was argued must lie in contract and not in delict or tort. My Lords, I seem to detect in that able argument reflections of the previous judicial approach to comparable problems before Donoghue v Stevenson was decided. That approach usually resulted in the conclusion that in principle the

proper remedy lay in contract and not outside it. But that approach and its concomitant philosophy ended in 1932 and for my part I should be reluctant to countenance its re-emergence some fifty years later in the instant case."[117]

As for delict or tort law protecting expectations, it would seem from Junior Books that in appropriate circumstances it may do so, unless one takes as some courts have (see earlier) Junior Books to have involved physical damage in which case delict/tort law is simply seen as protecting persons or property from unsafe products. The central issue, however, is the question of ascertaining the standard against which the consumer's expectations can be measured. This problem was the step which some of the judges in Junior Books could not overleap. Lord Fraser noted the difficulties quite succinctly:

"A manufacturer's duty to take care not to make a product that is dangerous sets a standard which is, in principle , easy to ascertain. The duty is owed to all who are his 'neighbours'. It is imposed upon him by the general law and is in addition to his contractual duties to other parties to the contract. But a duty not to produce a defective article sets a standard which is less easily ascertained, because it has to be judged largely by reference to the contract. As Windeyer J. said in

Voli v Inglewood Shire Council (1963) 110 CLR 74 at 85, if an architect undertakes to design a stage to bear only some specified weight, he could not be liable for the consequences of someone thereafter negligently permitting a greater weight to be put upon it. Similarly, a buliding constructed in fulfilment of a contract for a price of #100,000 might justly be regarded as defective, although the same building constructed in fulfilment of a contract for a price of #50,000 might not."[118]

Lord Brandon found similar problems:

"It is, I think, just worth while to consider the difficulties which would arise if the wider scope of the duty of care put forward by the pursuers were accepted. In any case where complaint was made by an ultimate consumer that a product made by some persons with whom he himself has no contract was defective, by what standard or standards of quality would the question of defectiveness fall to be decided? In the case of goods bought from a retailer, it could hardly be the standard prescribed by the contract between the retailer and the wholesaler, or between the wholesaler and the distributor, or between the distributor and the manufacturer,for the terms of such contracts would not even be known to the ultimate buyer...It follows that the question by what standard or

> standards alleged defects in a product complained of by its ultimate user or consumer are to be judged remains entirely at large and cannot be given any just or satisfactory answer."[119]

These comments rightly draw attention to a difficult matter, but they should not be accepted uncritically, for the decision in Junior Books does seem, if only in limited circumstances, to have "let tort loose on defects of quality".[120] How, in such circumstances, can one determine the standard to be expected of the goods? Clearly, the supplier of goods is at liberty to arrange by means of contractual terms for the ascertainment of the quality standard. However, it is suggested that the fears expressed by their Lordships, although a source of concern in some circumstances, are not a real worry in the context of a consumer against manufacturer product liability claim. In product cases contractual standards of quality are those taken from s14 Sale of Goods Act 1979. These are of course implied into contracts of sale and cannot be excluded in consumer sales; they are manifestly not the result of contractual negotiation. Admittedly, the 1979 Act's definition of merchantable quality is subject to the qualification

> "as is reasonable to expect having regard to any description applied to them, the price (if relevant) and other relevant circumstances."[121]

Thus, it could be argued that the terms of the bargain are relevant to the determination of quality. But that does not necessarily preclude delict/tort remedies; since price is relevant to contract liability, why can it not similarly be relevant to delict/tort liability? It might be argued that delict/tort liability in respect of qualitative defects in second hand goods would be particularly problematic. However, similar difficulties arise regarding safety deficiencies in second hand items, and these are coped with by delict/tort. Also, in most consumer contracts the price of, for example, a particular make and model of a motor car, is either fixed or is recommended by the manufacturer, any variation in price being the result of sales policy of the retailer rather than differences in the quality or safety characteristics of the product. No matter which dealer I buy the new car from, I will pay a very similar price to that charged by any other, and my expectations of quality will not be affected by contractual terms. As these matters are not the subject of contractual negotiation it could be argued that a delict/ tort standard of quality for ordinary consumer products in product liability cases is not beyond the imagination of the law.

Difficulties remain. By no means all product cases involve a product which is mass produced, and then sold in a consumer sale. Many product-related injuries stem from non-consumer products , and products are often

sold in private sales hence falling outwith the 1979 Act's easily ascertainable standards. However, it would be possible to allow recovery in delict/tort where the standard could be easily ascertained, but to disallow recovery in other cases.

That, however, is by no means the end of the matter. What for example if there is an exclusion or limitation clause in the terms of the contract between a manufacturer and, for example, a distributor? Does such a device affect the delict/tort duty to the consumer? Lord Roskill touched upon this matter briefly, in his speech in Junior Books:

> "During the argument it was asked what the position would be in a case where there was a relevant exclusion clause in the main contract. My Lords, that question does not arise for decision in the instant appeal, but in principle I would venture the view that such a clause according to the manner in which it was worded might in some circumstances limit the duty of care just as in the Hedley Byrne case the plaintiffs were ultimately defeated by the defendants' disclaimer of responsibility." [122]

In Muirhead, although the point again did not arise for decision, the view was expressed, per curiam, that where a supplier of goods incorporates the products of

another manufacturer into his goods and the contract for the sale of those products to the supplier includes a term excluding liability for damage consequent on defects in those products, the manufacturer is entitled to rely on that exclusion clause in an action for negligence arising out of such a defect brought directly against him by a purchaser from the supplier.[123] This is a matter of some difficulty and it is arguable that the headnote in the report does not reflect the text of Robert Goff L.J.'s judgment on this particular point. But if accurate, it would be an unjustifiable intrusion of contract into delict/tort. On the one hand it seems unjust to saddle the manufacturer with negligence liability for loss excluded vis a vis the other contractor by means of an exclusion clause, but on the other hand it seems equally unfair to allow the manufacturer to rely on the clause vis a vis someone who has no actual or constructive notice of its existence.

In such a case to permit a delictual or tortious remedy is to intrude upon the parties own allocation of the risk. But clearly it would be unsustainable for the manufacturer to rely on the exclusion clause to work against the consumer in a personal injury claim or a property damage claim. Is it reasonable then to disallow recovery in the case of pure economic loss on this basis? Or can it be argued that the end user can forsee the presence of such an exclusion device? While

this latter point arguably may be sustainable where a commercial user is concerned, it is surely untenable where the ordinary consumer is involved.

It is probably true that Lord Roskill, in making the remarks quoted above, meant the sub-contract rather than the main contract [124] Certainly, Lord Brandon in The Aliakmon could see no force in Lord Roskill's assertion:

> "As is apparent this observation was no more than an obiter dictum. Moreover, with great respect to Lord Roskill there is no analogy between the disclaimer in Hedley Byrne & Co. Ltd. v Heller & Partners Ltd. [1964] A.C. 465, which operated directly between the plaintiffs and the defendants, and an exclusion of liability clause in a contract to which the plaintiff is a party but the defendant is not. I do not therefore find in the observation of Lord Roskill relied on any convincing legal basis for qualifying a duty of care owed by A to B by reference to a contract to which A is, but B is not, a party." [125]

Clearly, Lord Brandon is correct in this view, although he unwittingly introduces some confusion by mixing up plaintiff and defendant in the example given. But it would be unjust were a manufacturer, who had excluded or limited his liability as regards the person to whom

he had supplied his products, when the protection thus obtained had been relevant in fixing the price, to incur liability for loss caused by qualitative defects to the ultimate consumer. It was for this reason, among others, that the Court of Appeal in Simaan, supra, was persuaded that purely economic loss of the type suffered in that case was not amenable to a delict/tort remedy. Again, however, the difficulties ought not to be over-emphasised. The manufacturer already carries the responsibility for actual or threatened personal injury or property damage, and the extension of this responsibility in the manner suggested would not be a major imposition. It is submitted that, accordingly, the manufacturer ought to be barred from relying on an exclusion clause in cases involving consumer products.

In summary, the question of recovery of pure economic loss is a matter of great difficulty. One is tempted, as recent courts have been, to approach the matter on pragmatic grounds and to prefer certainty to subtlety. But the whole question is one of such complexity that the present pragmatism is just too simple a solution.

It is too early to imagine a court affording a remedy in delict/tort to the putative Mrs. Donoghue in our example earlier, but it is at least arguable on policy grounds (including reliance) that a consumer who suffers purely economic loss caused by a defect in a product should be able to recover from the manufacturer

where the standard to be expected is readily ascertainable, as it will be in many consumer contracts. As has been argued, there are no floodgates fears in such circumstances, reliance, if relevant at all, is upon the manufacturer, and worries about interference with contract are generally unfounded. Donees, and sub-buyers (even in second-hand deals) ought to receive protection, but widespread liability is obviated by restricting recovery to those with a proprietary or possessory interest. It may be that recovery should be restricted to the cost of repair or replacement of the defective product, but this should not be necessary if, as is suggested, the extension of liability applies only to consumer products. Consequential loss in such circumstances is unlikely to be high. For the purpose of defining consumer products, a formula similar to that used in the 1987 Act - private use or consumption - could be used. Finally, there is at least one sound policy reason for imposing liability in the limited circumstances suggested: it ought to be a function of the law to provide incentives for manufacturers to produce not only safe products, but also products of which are not qualitatively deficient.

The chances of the courts currently accepting such a suggestion are, however, rather slim. As Lord Keith put it in Junior Books:

"One instance mentioned in argument....was a product purchased as ginger beer which turned out to be only water, and many others may be figured. To introduce a general liability covering such situations would be disruptive of commercial practice, under which the manufacturers of products commonly provide the ultimate purchaser with limited guarantees, usually undertaking only to replace parts exhibiting defective workmanship and excluding any consequential loss. There being no contractual relationship between manufacturer and ultimate consumer, no room would exist, if the suggested principle were accepted, for limiting the manufacturer's liability. The policy considerations which would be involved in introducing such a state of affairs appear to me to be such as a court of law cannot properly assess, and the question whether or not it would be in the interests of commerce and the public generally is, in my view, much better left for the legislature."[126]

Proposals for change and the 1987 Act

Little need be said in this present chapter on the position recommended in the proposals for change on recovery of purely economic loss, since as was clear from the last chapter, none of the proposals would have permitted recovery. Each set of proposals concerns itself with unsafe rather than shoddy products. This is

evidenced in two major respects: (a) the basis of the proposals, the definition ascribed to 'defectiveness', is couched in terms of safety - a product is defective if it does not provide the safety which persons generally are entitled to expect[127]; (b) the definitions of recoverable damage given in each of the recommendations exclude recovery of purely economic loss[128]. Thus, if the glass in Simaan, supra, or the water in the example above, had been the subject of a claim by the ultimate consumer against the manufacturer they would fall outside the strict liability regime on the grounds of not being defective and not being a recoverable form of damage.

As was made clear in the last chapter, the Consumer Protection Act 1987 restricts recoverable damage so as to exclude damage to the defective product itself and also purely economic loss. It does this in implementation of Article 9 of the Directive, which is stated in the Directive as being without prejudice to national provisions on non-material damage.

The American Experience

As in other jurisdictions, American cases disclose no uniformity of approach towards the problem of economic loss, and show many of the same difficulties which have troubled courts in the UK.[129] Economic loss

following upon damage to person or to property is clearly actionable but state courts have differed in their treatment of damage to the defective product itself, as well as other forms of economic loss.[130] However,a review of some of the leading decisions is beset with the inherent difficulties of: a variety of approaches in individual states; the existence of three avenues for recovery, - negligence, strict tort and warranty; and the existence of the distinction between negligent statements and negligent acts. All that is offered therefore is a brief coverage of the key points.

J'Aire Corp. v Gregory Inc[131] is a relatively recent American exploration of the economic loss problem in a negligence context. The plaintiff company leased space at Sonoma County Airport for the purpose of operating a restaurant. Gregory, a building contractor, contracted with the county to renovate the premises. As a result of delay in carrying out the work, the plaintiff suffered loss of business and sued the contractor in tort. The court held that a claim in tort had been made out.

As a generalisation, J'Aire can be perceived as stretching the limits of recovery in negligence in much the same way as Junior Books in that the relative degree of proximity between the parties was such as to permit a finding that the plaintiff tenant was affected

by the terms of the main contract and hence ought to be compensated for his loss of expected economic advantage as a result of the contractor's negligence. The decision may be also be viewed as cognate with others evidencing the activist role of the California Supreme Court, which has been a guiding hand behind the thrust towards wider tortious liability, although in the context of economic loss in products cases its decision in Seely not to afford a remedy in strict tort is more in keeping with the conservative line taken by other courts. California's rather tentative step, in J'Aire, has not been followed in many other jurisdictions, which continue to deny recovery[132].

Trans World Airlines v Curtiss Wright Corp. [133] is illustrative of the general view: TWA acquired a number of aircraft from the Lockheed Corporation. The aero engines had been produced by the defendants. After some time latent defects in the engines became patent and required repair. The claim for damage in respect of damage to the defective product was rejected, Eder J taking the familiar view:[134]

> "Damages for inferior quality per se should better be left to suits between vendors and purchasers, since they depend on the terms of the bargain between them."

This is indicative of the view of most courts[135] that

recovery in tort for economic losses is not permitted under either a negligence theory or a strict liability theory. Thus, very few courts permit a negligence claim between consumer and manufacturer in respect of purely economic loss caused by product defects.[136]

Liability in negligence for mis-statements has developed in the USA along broadly similar lines as in the U.K. but the availability of warranty as a basis for an action has largely precluded claims by consumers in respect of manufacturer's mis-statements. Again, Cardozo CJ's comments have cast a long shadow. Despite this, there have been developments in the field of professional negligence. In a relatively recent decision, Rosenblum v Adler[137], a case involving auditor's negligence, Cardozo CJ's view was rejected by the New Jersey Supreme Court in favour of a test based upon conventional forseeability.

Liability in strict tort for economic loss can conveniently be characterised as the Santor - Seely debate, discussed earlier[138]. Previous decisions, such as Henningsen v Bloomfield Motors Inc. and Chrysler Corp.[139] are illustrative of the kind of fact situation which can give rise to a claim for economic loss. In Henningsen, a husband and wife sued in respect of damage caused by defective steering in a car. The wife recovered damages in respect of her personal injuries, against both the retailer and the

manufacturer and the husband recovered, again against both defendants, for the replacement value of the car.

In Santor[140] some 96 yards of carpeting described as Grade 1 was bought by the plaintiff. Defects in the carpet soon became apparent and the buyer sued in strict tort or, alternatively, under implied warranty,in respect of his purely economic loss .The New Jersey Supreme Court allowed the claim on both grounds.

Very soon after this decision, the California Supreme Court had the opportunity to consider the problem of economic loss. In Seely v White Motor Co.[141] the purchaser sued in respect of loss of business caused by the unusably defective condition of a vehicle manufactured by the defendants. Ironically, Justice Traynor, who had in 1944 first recommended the strict tort idea, refused to extend the doctrine to recovery of purely economic loss. The court felt that the decision in Santor extended the limits of recovery just too far.

More than twenty years have elapsed since these decisions and the reaction of subsequent courts is clear: there is little support for the Santor view; Seely's no-liability rule for strict tort has generally prevailed. As was noted in the last chapter, some courts refuse recovery where the defective product

itself is damaged, classifying this as pure economic loss[142]. This is the East River approach; for recovery, there must be damage to person or to property other than the product itself. Other courts categorise some types of damage to the product itself as property damage and so permit recovery[143]. For these courts, purely qualitative deterioration or failure to match expectations is outwith the reach of tort. A minority allows recovery for pure economic loss. [144] Also, as was noted, many courts have taken it as implicit in the Seely decision (as did Justice Traynor explicitly in the case) that negligence law does not permit recovery.

It seems that this general adoption of Seely is at least partly a result of the view that the manufacturer's warranty under the Uniform Commercial Code gives sufficient protection to the consumer.[145] It is relatively easy to obtain a remedy on this basis. Indeed, the two leading decisions referred to above in the discussion of strict resulted in an additional finding of liability under warranty theory.[146]

In terms of legislation, the majority of individual states tend to exclude recovery for purely economic loss. At the federal level, purely economic loss is not recoverable under the current draft bill.

Conclusion

It is fashionable to assert that Junior Books is dead, and that the decisions reviewed in this chapter are aimed at giving it a decent but secure burial. If the consequence of that view is that purely economic loss be forever exiled from the field of recoverable damage, then conservatism and pragmatism will have triumphed over subtlety and the need for a flexible response to delict/tort challenges.

But the current composition of the Judicial Committee does not augur well for progress in this field. Lord Goff, who as Robert Goff L.J., gave the leading judgment denying recovery in Muirhead, and explained Junior Books in a restrictive fashion, is now a member of the House of Lords. Lord Brandon, the dissentient voice in Junior Books, remains in the House and has played an important part in the retrenchments, but three of the majority in that case have now retired.[147] Lord Keith, who was in the majority, along with Lord Roskill, has in later cases undermined the reasoning employed by Lord Roskill. [148] Similarly, Lord Roskill concurred with the opinion expressed by Lord Templeman in Tate and Lyle [149]to the effect that the loss in Junior Books was physical damage to property, which contradicts the tenor of Lord Roskill's own speech in Junior Books. Lord Keith also agreed with Lord Templeman's speech, having said in Junior Books that the appellants did not "in any sense consistent with the ordinary use of language" damage

the respondents' property.[150] Lord Fraser gave a very traditional view in Candlewood, and Lord Brandon gave a similarly strong affirmation of the exclusionary rule, with the concurrence of Lord Keith, in The Aliakmon.

The apparent inconsistencies in these views illustrate the difficulties caused by one-speech judgments, but the above account also shows the current conservatism of most of the Law Lorsd in their treatment of the recoverability of pure economic loss. However, Junior Books has not been overruled, and as recent cases, including Muirhead, demonstrate, purely economic loss claims continue to be arguable in delict/tort. Moreover, recent recruits to the Judicial Committee such as Lord Goff have their own imaginative ideas for dealing with economic loss[151].

As has been demonstrated, recent judgments have attempted to isolate the Anns' test for existence of a duty of care, but it is suggested that a formula which leaves some scope for imagination and expansion ought to replace it. If not, the argument that recovery has not been allowed in the past and therefore will not be allowed in the future, will prevail. This argument was rightly disparaged in Junior Books, and some flexibility ought to remain. In particular, as has been argued here, where a person suffers pure economic loss caused by qualitative defects in a consumer product none of the policy reasons which has been advanced in

order to restrict liability is sufficiently persuasive to disallow recovery. It may even be that strict liability for such loss is the eventual position adopted by the law, although it was clearly not to be expected that the new Act would make this leap.

REFERENCES - Chapter 6.

1. See e.g Atiyah, Negligence and Economic Loss, (1967) LQR 248; Cane, Physical Loss, Economic Loss and Products Liability, (1979) 95 LQR 117; Markesinis, Thesis - Antithesis But No Signs Yet Of A Synthesis, (1988) 104 LQR 9; Jones, Economic Loss - A Return To Pragmatism (1986) 102 LQR 13.

2. From the period 1982 - May 1988.

3. 1982 S.C. (H.L.) 244.

4. See e.g Holyoak, Tort and Contract After Junior Books, (1983) 99 LQR 591; Holyoak, Junior Books - The Practical Implications, 1983 JBL 384; Palmer and Murdoch, Expanding Contracts?, 46 MLR 213; Markesinis, op. cit., n1 supra; Jones, op. cit., n1 supra.

5. See discussion in Stanton, The Recovery of Pure Economic Loss in Tort - The Current Issues of Debate, Conference Paper, Colston Symposium, 1984. See also, e.g. Posner, Some Uses and Abuses of Economics in Law, 46 U. of Chi. L. Rev. 281 (1979); Rizzo, A Theory of Economic Loss in the Law of Torts, 11 J. of Leg. Studs. (1982); Bishop, Economic Loss in Tort, 2 Ox. J. Leg. Studs.1 (1982); Rizzo, The Economic Loss Problem - A Comment on Bishop, 2 Ox. J. of Leg. Studs. 197 (1982); Bishop, Economic Loss - A Reply to Professor Rizzo, 2 Ox. J. of Leg. Studs. 207 (1982).

6. See Stanton, op. cit. See also Clark, The Conceptual Basis of Product Liability, (1985) 48 MLR 325.

7. Cane, op. cit., n1

8. Ibid.

9. Chapter 5

10. See discussion in articles cited at n1, supra.

11. See cases at n70 - n72, infra, and accompanying text.

12. Hedley Byrne & Co. Ltd. v Heller & Ptnrs. Ltd. [1964] A.C. 465.

13. Jeb Fasteners Ltd. v Marks, Bloom & Co. [1983] 3 All ER 289; Twomax Ltd. v Dickson, McFarlane & Robinson 1983 SLT 98. For a relatively recent American view, see Rosenblum v Adler, 93 NJ 324, 461 A.2d. 138.(1983)

14. These decisions are reported at 1982 S.C. (H.L.)

244.

15. n12, supra.

16. Lord Brandon answered the first question from the Anns' test in the affirmative but then adduced policy reasons which in his view worked to preclude a duty: 1982 S.C. (H.L.) 244 at 281-2.

17. Anns v Merton London Borough Council [1977] A.C. 728.

18. With the exception of Lord Brandon, see n16 supra.

19. 1982 S.C. (H.L.) 244.

20. Miller, Product liability and Safety Encyclopaedia, (Butterworths) III 96.

21. At 277.

22. See discussion in Muirhead v Industrial Tank Specialities Ltd, [1985] 3 All E.R. 705.

23. Hedley Byrne & Co. Ltd. v Heller & Ptnrs. Ltd. [1964] A.C. 465, 517.

24. See Holyoak, 99 LQR 491.

25. See n33-n52 infra, and accompanying text.

26. 1932 S.C (H.L.) 31.

27. Dorset Yacht Co. Ltd. v Home Office [1970] A. C. 1004.

28. [1985] A.C. 210, at 240.

29. See Candlewood Navigation Corp. v Mitsui O.S.K. Lines Ltd. [1986] 1 AC 1. 21.

30. Leigh and Sillivan Ltd. v Aliakmon Shipping Co. Ltd. (The Aliakmon) [1986] A.C. 785.

31. Ibid, at 815.

32. Ibid.

33. See Yuen Kun Yeu v Attorney General of Hong Kong [1987] 3 WLR 776; see also Markesinis, op. cit. 104 LQR 10.

34. McLoughlin v O'Brian [1982] 2 W.L.R. 982.

35. Simaan General Contracting Co. v Pilkington Glass

Ltd. [1988] 1 All E.R. 791.

36. Ibid, at 805.

37. [1986] 3 All E.R. 705

38. Ibid, at 715.

39. 1982 S.C. (H.L.) 244 at 277.

40. [1986] A.C. 1.

41. [1986] A.C. 785.

42. Markesinis, op. cit., at 11.

43. [1986] A.C. 1 , 24-25.

44. [1986] A.C. 785, 817.

45. See discussion in Stewart, Economic Loss From Danage To Others' Property, 1987 S.L.T. 345.

46. Supra, n33.

47. East River Steamship Corp. v Transamerica Delaval, 106 S.Ct. 2295 (1986).

48. In Muirhead, supra n35, Robert Goff LJ said that dicta of Lord Fraser and Lord Roskill in Junior Books "assist us in approaching the present case on a pragmatic basis" (at p715). Dillon LJ, in Simaan, supra n33, at 805-6,also favoured a pragmatic solution.

49. See Jones , op. cit., at 18.

50. [1986] 1 A.C. 1 at 11.

51. [1986] A.C. 785 at 817.

52. [1988] 1 All E.R. 791 at 803.

53. Ibid, at 805.

54. [1985] 3 All E.R. 705.

55. 1982 S.C. (H.L.) 244, per Lord Keith at 267 and Lord Roskill at 273-4.

56. In particular, Anns v Merton London Borough Council [1978] A.C. 728; Batty v Metropolitan Property Realisations Ltd. [1978] 2 All E.R. 445. See also discussion in Chapter 5.

57. In Tate & Lyle Industries Ltd. v Greater London

Council [1983] 2 A.C. 509, Lord Templeman, with whose speech both Lord Keith and Lord Roskill agreed, described the loss in Junior Books as property damage. Also, in Simaan, n35 supra, at 803, Bingham L.J. said: "Junior Books has been interpreted as a case arising from physical damage. I doubt if that interpretation accords with Lord Roskill's intention, but it is binding on us."

58. 1982 S.C. (H.L.) 244 at 268. See also the speech of Lord Roskill, at 276.

59. Fuller and Perdue, The Reliance Interest in Contract Damages, 1936-1937 46 Yale L.J. 52, remains one of the leading discussions.

60. See Holyoak, 99 LQR 591, at 593.

61. H.L.A. Hart, The Concept of Law, (Oxford) 1961.

62. Palmer and Murdoch, op. cit.

63. Proof of fault would still, of course, be required.

64. Note 45, supra.

65. See Holyoak 99 LQR 591.

66. Hedley Byrne & Co. Ltd. v Heller and Partners Ltd. [1964] A.C. 465, per Lord Pearce at 534. See discussion in Craig, Negligent Mis-Statements, Negligent Acts and Economic Loss, (1976) 92 LQR 213

67. Ultramares Corp. v Touche (1931) 255 NY 170, at 179.

68. See e.g. Baxt, The Liability of Accountants and Auditors for Negligent Statements in Company Accounts, (1973) 36 MLR 42; A.M. Linden, Canadian Tort Law, 1977, p389.

69. In particular, see Bishop, Negligent Misrepresentations Through Economists' Eyes, (1980) 96 LQR 360. His view seems to have been contradicted by decisions such as Jeb, infra n70, and Twomax, infra, n72.

70. [1983] 3 All E.R. 289.

71. [1983] 1 All E.R. 583.

72. 1983 SLT 98.

73. E.G. Baxter, New Professional Negligence Liability Judgement - An Auditor's Nightmare, Accountancy, Aug.

1981; Stanton and Dugdale, Recent Developments in Professional Negligence: Accountants' Liability to Third Parties, 132 NLJ 4 (1982).

74. [1983] 3 All E.R. 289, at 296.

75. Anns v Merton London Borough Council [1978] A.C. 728.

76. [1983] 1 All E.R. 583, at 586.

77. 1982 S.C. (H.L.) 244 at 277.

78. Ibid, at 265.

79. See comments of Robert Goff LJ in Muirhead, supra n52 at 714-5.

80. Ibid.

81. 1982 S.C. (H.L.) 244 at 265.

82. Ibid, at 278.

83. See comments of Robert Goff LJ, n79 supra.

84. Discussed by Robert Goff L.J. at [1985] 3 All. E.R. 705, at 711.

85. Supra n54, at 711.

86. Ibid, at 716.

87. [1980] 1 All E.R. 978.

88. Ibid, at 1003.

89. [1978] A.C. 728, at 767.

90. [1966] 1 Q.B. 569, at 585.

91. See Yuen Kun Yeu v Attorney General of Hong Kong [1987] 3 WLR 776; see also Markesinis op. cit. 104 LQR 10.

92. [1986] A.C. 785, at 815.

93. See Markesinis, op. cit.

94. [1978] A.C. 728 at 751-2.

95. See Stanton, The Recovery of Pure Economic Loss in Tort- The Current Issues of Debate, Discussion Paper, Colston Symposium, April 1984.

96. 1932 S.C. (H.L.) 31.

97. Supra, n52, at 714.

98. Ibid.

99. Ibid, at 716.

100. See Stanton, op. cit., n95 supra.

101. [1978] A.C. 728, at 751-2.

102. Note 67, supra.

103. See Stanton, op. cit.

104. 1982 S.C. (H.L.) 244 at 264.

105. Ibid, at 276.

106. Bowen v Paramount Builders (Hamilton) Ltd. [1977] 1 NZLR 394, at 472.

107. Supra, n52 at 712.

108. [1986] 1 A.C. 785, at 816.

109. See Stanton op. cit.

110. Note 45, supra.

111. Ibid.

112. Seely v White Motor Co. 45 Cal. Rptr. 17 (1965)

113. Ibid.

114. 1982 S.C. (H.L.) 244 at 282.

115. [1988] 1 All E.R. 791 at 804.

116. Note 79, supra.

117. 1982 S.C. (H.L.) 244 at 276.

118. Ibid, at 265.

119. Ibid, at 282-3.

120. Stanton, op. cit.

121. Sale of Goods Act 1979 s14(6).

122. 1982 S.C. (H.L.) 244 at 277.

123. Note 79 supra, at 717 and 719.

124. Ibid, at 713.

125. [1986] 1 A.C. 785, at 817. In Commercial Finacial services Ltd. v McBeth & Co. 1988 S.L.T. 528, Lord Mayfield held that an exemption clause can exclude liability to a third party if brought to that third party's notice.

126. 1982 S.C. (H.L.) 244 at 268-9.

127. Reflected in the definition of defect in s3(1) of the 1987 Act.

128. See discussion in Chapter 5.

129. See Bellehumeur, Recovery For Economic Loss Under a Products Liability Theory: From The Beginning Through The Current Trend, 70 Marq. L.R. 320 (1987).

130. Ibid. See also, Rabin, Characterisation, Context and the Problem of Economic Loss in American Tort Law, Discussion draft, Colston Symposium, April 1984.

131. 24 Cal. 3d. 799 (1979).

132. See discussion in Bellehumeur, op. cit., n129 supra.

133. 148 N.Y.S. 2d. 284 (1956).

134. At 290. See discussion in Miller and Lovell, op. cit., at 339-340.

135. Described by the court in East River, n45 supra, as the majority land-based approach.

136. See Bellehumeur, n129 supra.

137. 93 N.J. 324, 461 A.2d. 138 (1983).

138. See Chapter 5.

139. 161 A.2d. 69 (1960).

140. 45 Cal. Rptr. 17 (1965).

141. 207 A.2d. 305 (N.J.1965).

142. See e.g. American Home Assurance Co.v Major Tool & Machine Inc. ,767 F.2d. 446. (8th Cir. 1985); James v Bell Helicopter Co., 715 F. 2d. 166 (5th Cir. 1983). East River, n45 supra.

143. See e.g. Pennsylvania Glass sand Corp. v Caterpillar Tractor Co., 652 F.2d. 1165 (3d. Cir 1981); other examples are given in Chapter 5.

144. In particular, New Jersey permits recovery, based on Santor, n141 supra.

145. This was a key point in the Supreme Court decision in East River, n45 supra.

146. Seely, n140 supra, and Santor n141, supra.

147. See discussion by Lord Griffiths, Developments in the Law of Product Liability, Holdsworth Club 1987.

148. Governors of the Peabody Donation Fund v Sir Lindsay Parkinson & Co. Ltd. [1985] A.C. 211 at 240 et. seq.

149. Tate and Lyle Industries Ltd. v Greater London Council [1983] 2 A.C. 509, at 530.

150. 1982 S.C. (H.L.) 244 at 268.

151. See his theory of transferred loss, outlined in the Court of Appeal in The Aliakmon [1985] Q.B. 350, at 399; this theory was criticised by Lord Brandon in the House of Lords [1986] 1 A.C. 785, at 819-820.

CHAPTER 7

DEVELOPMENT RISKS

The central controversy in the field of product liability, which has dominated discussion of the new regime, is the so-called "development risks" defence.[1] By invoking this defence, a the person proceeded against can escape liability for loss caused by a defect in his product if he can prove that the state of scientific and technical knowledge at the relevant time[2] was not such that a producer of products of the same description as the product in question might be expected to have discovered the defect if it had existed in his products while they were under his control.

As was noted earlier, the U.K. government insisted upon inclusion of this defence before accepting the Directive. A minority of other Member States are of the view that no such defence is necessary. Accordingly, Article 15 of the Directive allows Member States to derogate from Article 7(e) - which permits the development risks defence - by extending strict liability to include development risks. The resulting difference between states on this central issue is

unfortunate in a measure aimed at harmonisation of product liability laws throughout the Community. Earlier drafts of the Directive, in common with the view taken in the Strasbourg Convention,[3] and the recommendations of the Law Commissions[4] and the Pearson Commission,[5] did not permit this derogation.

Much of the time spent on debating the proposed new strict liability regime concerned development risks. Discussion of the issue was prolonged and at times heated.[6] The European Commission and the European Parliament were divided on this question, reflecting the views of Member States. Policy considerations which were ventilated in these debates are explored in the course of this chapter. Put simply, those against the defence argue that its inclusion emasculates strict liability and subverts the policy aims underlying the new regime. The opposing view is that without such a defence potential liability would be indeterminate and could be catastrophic, and that more cogent policy considerations (including the wish not to stifle innovation) outweighed the aims of the purists.

Parliamentary and other discussions of the defence have, however, been hampered by a lack of clarity as to the precise scope of the protection which it affords. In its Explanatory and Consultative Note [7] the U.K. government indicated that in its view it will not be easy for a producer successfully to plead this defence.

However, in a highly controversial move, when the Bill was introduced the government used a form of words in the defence which differed substantially from the wording used in the Directive.[8] During the passage of the Bill, the House of Lords restored the Directive's wording only to have the government's original wording returned in the Commons.[9] The wording in the Act has angered consumer groups, who have stated that they may take the matter to the European Court to decide whether the government has fulfilled its obligation faithfully to implement the Directive. Indeed, the European Commission has formally protested to the government about the change of wording[10] arguing that the form of words used in the Act would 'empty the directive of much of its content'. The nature and consequences of the wording adopted will shortly be considered. This chapter will also include analysis of American experience on use of the state of the art defence, as well as discussing whether the terms 'state of the art' and 'development risks' are synonymous. It will be argued that the defence as currently worded has the potential to return the new regime to a position very close to that which existed under negligence, and that when the time comes for the presence of the defence to be reviewed - in 1995 [11] - the opportunity should be taken to remove it from the scheme of strict liability.

As well as providing a suitable starting point for discussion, a brief examination of the treatment of

development risks in contract and in negligence will help by providing illustrations of the type of problems with which courts are faced in dealing with development risks.

Development risks in contract and negligence

a) Contract

The term 'products' in the context of product liability in contract law is generally taken to be synonymous with 'goods'. This means that the question of liability for defects is answered by the terms of the Sale of Goods Act 1979. Contractual liability for products which are not goods, for example, electricity, is covered by the common law in the absence of specific statutory provision.

As is well known, s14 of the Sale of Goods Act 1979 provides that goods must be of merchantable quality and/or fit for their purpose; liability for breach of this implied term, which is non-excludable in a consumer sale, is of course visited on the other contracting party and is strict. In keeping with this strict nature of the liability, the seller is liable even for unknown and undiscoverable defects in the products sold. A number of cases illustrate this point.[12] In Frost v Aylesbury Dairy Company Ltd [13], for example, milk containing typhoid germs was

challenged as being unfit for its purpose under the precursor of the present s14. Counsel for the defendants argued that the typhoid bacillus was discoverable only by a prolonged bacterial examination. In the circumstances, this was impossible since the milk was required for immediate consumption. Accordingly, the defect was argued to be undiscoverable and it was contended that:

> "... it has never been held that a defect that is undiscoverable makes the seller liable on implied warranty."[14]

In rejecting this argument, the court made reference to dicta in Randall v Newson[15]

> "If the article or commodity offered or delivered does not in fact answer the description of it in the contract, it does not do so more or less because the defect is patent, latent or discoverable"

Although this statement spoke of description, the court in Frost clearly was of the view that the same consideration applied to the question of quality.

This case illustrates a matter which will continue to be of importance even under the new rules: speaking literally, the defect was not undiscoverable and indeed

the defendants admitted as much; their argument really was that discovery was not feasible in the circumstances.

Another, more recent, case on s14 involved this same point on undiscoverability/feasibility of discovery. In Henry Kendall and Sons v William Lillico and Sons Ltd.[16], compounded meal purchased by game farmers and fed to pheasants and partridges caused many of the animals to die and stunted the growth of others. This was due to the presence of aflatoxin, a poisonous substance caused by mould or fungal growth. The toxic agent was present only in certain affected batches of the meal. It was argued on behalf of the defendants that the defect in the meal could not have been discovered. Finding the defendants liable, Lord Reid stated:

> "If the law were always logical one would suppose that a buyer who has obtained a right to rely on the seller's skill and judgement, would only obtain thereby an assurance that proper skill and judgement had been exercised, and would only be entitled to a remedy if a defect in the goods was due to a failure to exercise such skill and judgement. But the law has always gone farther than that. By getting the seller to undertake to use his skill and judgement the buyer gets ....an assurance that the goods will be reasonably fit for

his purpose and that covers defects which are latent in the sense that even the utmost skill and judgement on the part of the seller would not have detected them."[17]

Clearly, Lord Reid's view supports the imposition of liability upon sellers even for undiscoverable defects. But undiscoverability will depend upon a number of factors, including whether the seller was a retail vendor or a manufacturer as well as seller. In the former case, the resources for discovery will simply, in the ordinary case, not exist. However, the same is not necessarily true for the manufacturer-vendor. Part of the manufacturer's skill and judgment in the production of his goods is to test his product. If an extremely rigorous testing or quality control programme was adopted then many defects would become discoverable. In Henry Kendall, the presence of aflatoxin could have been discovered by such methods. The defect was discoverable, in the sense that the scientific and technical means for its discovery existed, although in the circumstances discovery was not feasible.

Does Lord Reid's statement cover, as it seems, defects which are, literally, undiscoverable? In Ashington Piggeries Ltd. v Christopher Hill Ltd[18], animal feedstuff contained dimethylnitrasomine (DMNA), a substance which was not generally harmful to animals

but which was fatal to mink. The contamination resulted from a reaction between a preservative and other agents in the feedstuff. So, although the presence of DMNA was not an intentional feature of the feed formula it was a consequence of the reaction of the ingredients. In this sense, there was a design defect in the product. It was established in evidence that the toxic effect of DMNA upon mink was known to science some four years prior to the sale in the instant case. However, as Lord Diplock pointed out:

> "in the then state of knowledge scientific and commercial no deliberate exercise of human skill or judgement could have prevented the meal from having its toxic effect on mink. It was sheer bad luck."[19]

Thus, the toxic effect of DMNA was known to science but its production by the reaction involved in the meal seems not to have been known. Nevertheless, the court found the seller liable. A similar analogy could be drawn with hepatitis and AIDS: the former is discoverable in blood and the relevant test is known, while the latter was until recently unknown and hence undiscoverable.

Contract law's strict liability for product defects can thus be said to cover defects which could feasibly have been discovered, and also defects which were

undiscoverable in the light of current scientific and technical knowledge.

(b) Negligence

Under negligence law the position is equally clear - if a defect is discoverable and the exercise of reasonable care would have led to its discovery then a producer who puts the defective product into circulation will find himself liable for harm caused by the product. Vacwell Engineering Co. Ltd. v BDH Chemicals Ltd.[20] is often quoted in this context: the product - boron tribromide contained in glass ampoules - was defective in that it reacted violently with water, causing explosion, and this reaction had not adequately been warned against. The explosive properties of this reaction had been documented some years earlier, but more recent scientific journals were inexplicit on this point. Patently, the defect was discoverable on the exercise of reasonable care and so it was held that the producers were liable in tort.

Since undiscoverable defects cannot by their nature be identified by the exercise of all care, let alone reasonable care, liability in negligence will not arise in respect of loss caused by such defects. As was noted in the discussion of contract liability, there also exists a class of defects which are known to science and thus are discoverable. Clearly, the concept

of reasonable care involves considerations of feasibility in such situations: discovery may be scientifically possible, but the means required for discovery may not be consistent with the exercise of merely reasonable care, in which case the manufacturer will not be liable.

North Scottish Helicopters Ltd. v United Technologies plc,[21] illustrates some of the difficulties which a producer may encounter in seeking to discover potential defects in his product. A helicopter caught fire while being given a ground test, and it was argued on behalf of the pursuers that the fire was caused by a defect in the rotor brake mechanism. This brake mechanism was highly complex, but essentially involved a set of pucks being brought into contact with a rotating disc. It was argued that 'puck drag' had occurred by a puck failing to disengage from the rotating disc, causing overheating and eventually the ignition of leaked hydraulic fluid. After a welter of expert evidence was led, resulting in an 80 page judgment, Lord Davidson found both the manufacturers of the helicopter and the designers and manufacturers of the brake unit not liable in negligence. The alleged defect in the brake unit was held not to have been discoverable by its manufacturers who were therefore not negligent in failing to guard against or eliminate the danger. Four earlier incidents involving helicopter fires could, could reasonably be regarded as having been caused by

human error so that none of these incidents ought to have alerted the manufacturers of the helicopter to the possibility of a defect in the rotor brake system.

Of wider interest however, are Lord Davidson's comments on the difficulties facing the pursuer on the discoverability issue:

> "As the proof progressed it became clear that the pursuers' experts laboured under serious disadvantages. Although they had considerable engineering ability, none of them had the detailed knowledge and familiarity with the subject that the defenders' various engineering witnesses could command. In addition, the defenders' had ample oportunity to carry out tests on s76 helicopters and other equipment. The pursuers' experts had no comparable facilities"[22].

His Lordship also considered it to be unfortunate that the the pursuers' and their experts had little if any knowledge of the detailed exposition to be developed by the experts of the defenders [23].

The extent to which these difficulties have been alleviated by the new regime is open to some doubt and if, as is likely, an alternative ground of negligence and strict liability is argued in future cases like the above, this will result in even lengthier litigation.

Proposals for change

Of the four major sets of proposals for change to a system of strict liability for product defects which were mooted in the 1970's the EEC draft Directive was adopted after modification and so achieved primacy. The others will therefore remain on the shelf. Nevertheless, the debate on strict liability and development risks in these various proposals is of interest as it helps to expose the policy reasons which lie beneath the recommendations. For this reason, the views of the bodies concerned are quoted, quite fully, below. An analysis of the issues raised follows this summary.

Summary of views on development risks

(i) Strasbourg Convention[24]

Article 3(1) of the Convention provides:

> "The producer shall be liable to pay compensation for death or personal injuries caused by a defect in his product"

Article 5(1)(b) states that a producer shall not be liable under the Convention if he proves:

> "that, having regard to the circumstances, it is

probable that the defect which caused the damage did not exist at the time when the product was put into circulation by him or that this defect came into being afterwards."

Article 2(c) further provides that:

"a product has a 'defect' when it does not provide the safety which a person is entitled to expect, having regard to all the circumstances including the presentation of the product."

In its Explanatory Report the committee comments upon this part of the text of the Convention:

"The question was posed as to whether it would not be expedient to stipulate the time at which the safety of the product must be determined. It was suggested that the safe nature of the product must be judged at the time the product was put into circulation and not at the time when the damage occurred...The committee was against including any stipulation of this kind in paragraph c since it would implicitly admit as an exception 'development risks'. Moreover, the definition of defect in paragraph c gave the judge a sufficient margin of appreciation to enable him to take the time factor into account."[25]

So, by omitting any reference to the time when the product was put into circulation from the definition of defective, the committee sought to avoid any indirect inclusion of a development risks defence.

The matter was more directly dealt with later in the Explanatory Report:

> "As the convention provides for a system of 'strict' liability, and in so far as it does not expressly stipulate that the producer may be discharged of his liability if he proves that damage is the result of a 'development risk', such risks are not to be regarded as an exception and are therefore covered by the convention...This concerns damage produced by a cause that could not be foreseen or avoided given the state of scientific knowledge at the time when the product was put into circulation. In other words, the defect existed when the product was put into circulation but was not and could not be known to the producer. The defect could be revealed only by subsequent scientific discovery" [26]

Paragraph 42 of the Explanatory Report contains the final section of the Strasbourg recommendations which is relevant for present purposes:

> "On the other hand the committee agreed that a

distinction should be made between 'development risks' and other situations in which the 'time factor' played a part and which were covered by the definition of a 'defect'....This is a case of 'subsequent defects', that is to say defects which were not considered as such when the product was put into circulation but became 'defects' in the meaning of the definition, as a result of new technological discoveries, In other words the product is manufactured in accordance with the rules in force at the time when it is put into circulation but can no longer be regarded as complying with the rules governing safety following new scientific and technological development. The defect may then be revealed by comparison with a similar product manufactured according to the new methods.... It is for example obvious that if a person buys in 1977 a refrigerator manufactured in 1948 which lacks certain safety devices (such as a door that can be opened from inside) included in 1977 models, that person is not entitled to expect the same degree of safety as would be offered by a refrigerator manufactured in 1977."

(ii) Law Commissions' Report[27]

In paragraph 49 of their report the Law Commissions broached the difficulty which had exercised the minds of the Strasbourg committee:

"It concerns the time at which the defectiveness of the product should be determined for the purposes of imposing strict liability on the producer. There are, in our view, only two possible solutions; one is to judge the defectiveness of the product as at the time of the accident and the other as at the time that the producer put the product into circulation. We have no doubt that the appropriate time is when the producer put his product into circulation. He ought, not, in our view, to be liable for defects in the product that appear at a later stage. We do not think it would be right to impose liability on a producer for a product that was safe when it left his hands.... Nor do we think it would be fair to apply the safety standard of 1977 to products put into circulation in 1967. For example it would not be right to regard a 1967 car as defective merely on the ground that it was not produced with safety belts attached. We accordingly conclude that the producer of a product should not be liable where he can establish that the product was not defective when he put it into circulation."

Turning to the specific matter of development risks the Commissions state:

"Our conclusion is that there should not be a special defence that the product was as safe as the

state of the art would allow. In many cases such a product would not be held to be defective according to the principles which we suggested...since it would be as safe as a person would be entitled to expect. However, where the product turned out to be unsafe - and it is impossible to consider this problem without thinking of the facts of the thalidomide case - we think the injured person should be compensated by the producer however careful he had been."[28]

The Commissions' recommendation as to the definition of defective distils the above views:

"A product should be regarded as defective if, at the time when it is put into circulation by whoever is responsible for it as its producer, it does not comply with the standard of reasonable safety that a person is entitled to expect of it." [29]

Clearly then the Commissions, although broadly in accord with the Strasbourg view, did not perceive any difficulty as regards a back door entry for development risks in including the matter of time put into circulation as part of the definition of defective.

(iii) Pearson Report[30]

The Pearson Commission echoed the views of the Law

Commissions and on similar policy grounds dismissed the idea of affording a defence for development risks. After a brief review of some of the main arguments for and against such a defence the report concludes:

> "On the other hand, to exclude development risks from a regime of strict liability would be to leave a gap in the compensation cover through which, for example, the victims of another Thalidomide disaster might easily slip. We recommend that the producer should not be allowed a defence of development risk."[31]

As to the appropriate time at which defectiveness was to be adjudged, it was recommended:

> "... that it should be a defence for a producer to prove either that he did not put the product into circulation; or that the product was not defective when he did so...."[32]

However, the time of putting the product into circulation was not to be comprised in the definition of defect since the Commission expressly adopted the Strasbourg definition of that term.[33]

(iv) <u>EEC Directive[34]</u>

As indicated earlier the terms of the final version of

the EEC Directive represent a volte face on the question of development risks. Article 1 of the 1976 draft stated the former position:

> "The producer of an article shall be liable for damage caused by a defect in the article, whether or not he knew or could have known of the defect. The producer shall be liable even if the article could not have been regarded as defective in the light of the scientific and technological development at the time when he put the article into circulation."[35]

Despite the Commission's earlier rebuff to the European Parliament's view that a state of the art defence ought to be allowed[36] , the strength of the lobby in favour of inclusion of the defence prevailed. Thus, the final version includes the defence but permits Member States to derogate by excluding it from their scheme of liability. Article 7 states that a producer shall not be liable as a result of the Directive if he proves:

> "that the state of scientific and technical knowledge at the time when he put the product into circulation was not such as to enable the existence of the defect to be discovered."

Also, as was noted earlier, the definition of defective suggested by the Directive takes into account the time

at which a product was put into circulation. It is a further defence under the Directive for the producer to establish that, having regard to the circumstances, it is probable that the defect which caused the damage did not exist at the time when the product was put into circulation by him or that this defect came into being afterwards. [37]

Development risks, state of the art and the time factor in establishing defectiveness.

Prior to any discussion of how the new legislation has implemented the Directive's provisions on development risks, it is worth seeking to achieve some clarity as to the meanings of the terms 'development risks' and 'state of the art', and also to understand the relationship between these terms and the time factor in the definition of defect. It is clear that there is some disagreement about the use of terminology in the current context. For many years the defence now known as development risks was described as the state of the art defence, and a number of commentators used the terms interchangeably. Neither term has a meaning which is self evident from the words used. French (risque de developpement) and German (Entwicklungsrisiken) translations are equally unhelpful.[38] Clearly, development risks does not mean the risk that the later development of safer products shows the product in question to have been defective when put into

circulation; the definition of defective allows the time factor to be taken into consideration and such a product would not be defective simply by reason of safer products having later been developed. Also, state of the art does not simply mean the current state of industry practice - to argue that the producer carried out the same tests as his fellow producers is not of itself a defence in negligence let alone in strict liability.

Both terms have often been used to mean the same thing: that given the existing state of scientific and technical knowledge the defect was not reasonably discoverable. If it is thought that any need will be served by distinguishing between the two terms then the following distinction may be of help: the term state of the art could be used to connote a product which is not defective when judged against the prevailing safety standards at the time when it was put into circulation; in contrast, the term development risks is used in situations in which the product <u>is</u> defective when put into circulation, but the manufacturer has the defence that existing knowledge made the defect not reasonably discoverable.[39] Thus, state of the art arguments relate to the question of defectiveness, while development risks issues arise later, as a defence to a finding of defectiveness. Assume for example that it becomes standard practice at some future time for all lawnmowers to have automatic cut-out switches when the

cable is damaged. A lawnmower manufactured at the present time would not be considered to be defective simply because it did not have the safety device - it complied with the state of the art, in terms of reasonably expected safety, at the time of being put into circulation. If, on the other hand, a drug is found to cause cancer then it may be found to be defective and it will have been so from the time of being put into circulation. In such a case, the producer will often seek to invoke the development risks defence.

It may be that there is no pressing need to distinguish between state of the art and development risks. However, the above dichotomy may be helpful in indicating that the question of feasible additional safety features in manufactured products is not a development risks question; it is one of defectiveness. Development risks are about reasonable discoverability, and the issue ought not to arise in argument about additional safety features; it does not relate to the preclusion of known hazards but to the question of whether unknown hazards ought to have been discovered. This is, it is suggested, a matter of great importance in understanding how the defence ought to function.

Development risks under the Consumer Protection Act 1987

In its Explanatory and Consultative Note on Impementation of the EC Directive on Product Liability, the government made plain its intention not to take advantage of the derogation, which the Directive permits, from inclusion of the development risks defence:

> "A true development risk is rare and yet the availability of the defence has been one of the most controversial issues raised by the Directive. Some have argued that the inclusion of such a defence would leave a significant gap in the liability system, through which victims of unforeseeble disasters would remain uncompensated and which would bring back many of the complexities and legal arguments that the introduction of strict liability is supposed to avoid. Manufacturers, on the other hand, have argued that it would be wrong in principle, and disastrous in practice, for businesses to be held liable for defects that they could not possibly have foreseen. They believe that the absence of this defence would raise insurance costs and inhibit innovation, especially in high risk industries. Many useful new products, which might entail a development risk, would not be put on the market, and consumers as well as business would lose out." [40]

Thus the government was persuaded that the policy

reasons for inclusion outweighed the arguments against. More controversy followed, however, when the government unveiled the wording of the defence in the Bill. There appeared to be material differences between the Bill and the Directive which, as was noticed earlier, upset the consumer lobby and the European Commission.

Section 4(1)(e) of the Act allows the person proceeded against a defence if he can show:

> "that the state of scientific and technical knowledge at the relevant time was not such that a producer of products of the same description as the product in question might be expected to have discovered the defect if it had existed in his products while they were under his control;"[41]

As can be seen from a comparison between the Act's wording and that used in the Directive the major changes are the substitution of "might be expected" for "enable", and the introduction of the phrase "a producer of products as the same description as the product in question".

It is reasonably clear that a defence based upon a state of knowledge which enables discovery of a defect, is less protective of manufacturers than one based upon a state of knowledge in which discovery might be expected.However, in the government's view there is no

material difference between the wording adopted and that in the Directive[42],but those lobbying on behalf of industry took the view that the government's version did indeed make it easier for a producer to mount the defence.[43] It is clear that even under the wording in the Directive a producer was not deemed able to be aware of every flash of inspiration possible about the safety of his product. Indeed, even where scientific knowledge had entered the public domain - for example by publication in a scientific journal - the producer could arguably still have invoked the defence if the journal was sufficiently obscure or unavailable to 'enable' discovery of the defect. But, the words 'might be expected' import a reasonableness test, smacking strongly of that used in negligence.

It could also be argued that the wording in the Act, although intended to create an objective test, introduces an element of subjectivity into the defence.[44] by referring to producers of products of the same description as the product in question. This might be taken by a court to involve the state of mind of the average producer of the particular type of product.[45] For example, if the average producer of a particular type of product is a small scale business, with limited resources for testing, then a producer of such products would not be expected to carry out extensive inquiries into product safety.[46] The

wording adopted focuses unwelcome attention on the research facilities and other resources of the average producer.[47] Even if the average producer is purely notional, some decision about his size and resources seems necessary in order to determine what he might be expected to heve discovered.

A further difficulty also results from the government's choice of wording: it may well be that there is no actual 'producer of products as the same description as the product in question'. This will often be the case where new products are involved. The Act is not clear as to how such a situation is to be treated. [48] Even if a notional producer is invented, it will be difficult to determine what he might be expected to have discovered about the new product. The Act is also unclear as to the precise meaning of the term 'control' in setion 4(1)(e). When are products under the control of the producer for the purposes of his ability to discover defects?

It is to be hoped that in construing the wording of the defence the U.K. courts will look for what a notional reasonable producer would have done, rather than what the average producer of that type of product would have done. The worry is that this apparent incursion of subjectivity into the defence will result in the defence being much more widely relied upon than the Directive intended. The U.K. courts must also bear in

mind, in interpreting the Act, section 1(1):

> "This Part shall have effect for the purpose of making such provision as is necessary in order to comply with the product liability Directive and shall be construed accordingly."

There is then scope for the defence to be interpreted in a lenient manner, but the government has expressed the view that the intention is that the defence will be of limited application. Having rather ironically stated that the defence is 'stringently defined in the Directive', the Explanatory and Consultative Note goes on:

> "It is understood that the defence should be interpreted as meaning that the producer will not be liable if he proves that, given the state of scientific and technical knowledge at the time the product was put into circulation, no producer of a product of that kind could have been expected to have discovered the existence of the defect. The burden of proof will fall squarely on the producer to show that the defect could not reasonably be expected to have been discovered. It will not necessarily be enough to show that he has done as many tests as his competitor, nor that he did all the tests required of him by a government regulation setting a minimum standard. It will

therefore not be easy for a producer successfully to plead this defence..."[49]

"Relevant time" has the meaning accorded to it by s4(2) and will usually mean time of supply by the producer, own-brander or importer. It must also be noticed that the development risks defence, like the other defnces in the Act, applies in favour of 'the person proceeded against' who may not, of course, always be the producer.

The defence of development risks has always been taken to be of particular importance in high risk industries in which innovation is often the price of success. In the pharmaceuticals, aerospace, chemical and agri-chemical sectors there is some relief not only that the defence has been included but also that the wording used by the government has prevailed. If the defence is given a lenient interpretation, then a producer who shows that he has taken the steps which an average producer ought to have taken will avoid liability. This is simply a return to a negligence standard of liability, with the burden of proof reversed (since the producer must establish the defence); rather than ask the pursuer to prove fault, as negligence law does, the new rules will be read as asking the producer to disprove fault. If, on the other hand, the defence is interpreted strictly, to apply as it should to truly

undiscoverable defects, then the new regime of liability will fail to achieve an important objective: simplifying the trial process. In every case in which for example a drug produces unforeseen side-effects we can expect the producer to establish that he did the usual tests, and then to proceed to a lengthy and expensive trial, involving a parade of expert witnesses, of the discoverability issue. A pursuer wishing to embark on an action against such a producer will be faced with the major dis-incentive of very large costs if the action fails.

Before leaving this section, it is worth commenting on the view expressed by the Pearson Commission and echoed by those opposing the government in the Parliamentary debates on this issue - that to include a defence of development risks will leave a gap in the protection available through which the victims of another Thalidomide tragedy might fall. [50] Scientific and medical opinion was divided as to exactly what was the state of knowledge at the time of circulation of Thalidomide. [51] Tests for teratogenicity (the capability of producing congenital malformation) were not part of the standard procedure for drug testing at the relevant time. Such tests were themselves problematic due to the wide range of effects which might be manifested in laboratory animals, and there is the overriding difficulty of extraploating from animal experiments data relevant to humans.[52] On the other

hand, it had been known for many years that drugs could harm the foetus, and so, arguably, teratogenicity tests should have been a matter of course, especially in a drug used to combat morning sickness. Many of the major drug companies carried out tests for foetal abnormality, even for such things as anti-malaria drugs or tranquillisers. It was also established before the marketing of Thalidomide that the period during which a woman experiences morning sickness at its most troublesome is at the stage of organogenesis - the formation of organs and limbs.[53]

These considerations prompt the view that Thalidomide ought not to be taken as a model example of the use of the development risks defence [54] since the danger of the product was reasonably discoverable. Also, safety procedures in the production of pharmaceuticals have been greatly improved since, and partly because of, the Thalidomide tragedy. Thus, were a similar tragedy to happen today there would be no real difficulty in finding defectiveness of the product and in refusing to allow the development risks defence. However, and this is at the heart of the view expressed in the Pearson Report and by its followers in Parliament, tragedies caused by chemicals and drugs seem bound to continue - witness the current Opren affair. Medical science may well perhaps be past its infancy, but it may not yet be out of its youth. Surely the risk of harm being caused by undiscoverable defects should be borne by the

producer, and spread throughout the consumers of his product by being reflected in the price? The decision to include a development risks defence means that the risk of harm caused by defects which were not reasonably discoverable falls solely on the victim. Policy reasons for the adoption of the defence will be more fully canvassed later, after consideration of the substantial experience built up by American courts in dealing with the matter

The American Experience

As befits a central issue in the product liability area, the question of liability for undiscoverable defects, and related matters, has given rise to a considerable literature and a diversity of views among judges, academics and other commentators.[55] Difficulties in analysing the American experience arise, as usual, from the different views taken in individual states and from the existence of negligence, implied warranty and strict liability as three separate theories upon which liability may be argued. In the present context, however, these difficulties are much increased by the inexactitude of the usage of terminology. The Americans do not use the term development risks as it is used in this discussion; rather, 'state of the art' is the accepted label. One of the leading commentators, Dean Wade, speaks of state of the art as a 'chameleon-like term' and states that

its use ought to be abandoned since 'its meanings are so diverse and so often confused.'[56] Twerski says that the term 'came to mean all things to all people'.[57] This lack of clarity bedevils any attempt at a concise analysis.

A further difficulty is the popularity in products cases of plaintiffs basing their claims on the ground of failure to warn. Since this will involve considerations of foreseeability and knowledge, state of the art questions loom large.

Here the discussion will be confined to an examination of the main uses of state of the art evidence in strict liability cases, other matters being only briefly adumbrated.

There are three main applications of the term state of the art: firstly, a manufacturer can assert that he complied with prevailing industry practice and standards; secondly, state of the art evidence can be led in order to show feasibility, or lack of feasibility, of a safer design; lastly, the term can be used to mean scientific undiscoverability of the defect. Following discussion of these, the major, issues, some comment will be offered on the use of state of the art evidence in warning cases, and then in cases involving allegedly unavoidable dangers.

(i) Compliance with industry standards

Evidence that the the safety of a particular product matches that practised by the industry in general will of course be a common feature in negligence cases, and may indeed raise a presumption that due care has been exercised.In Day v Barber-Colman Co.,[58] a sliding door fell upon and injured a man who was installing it, and he sued the manufacturer in negligence. This was the first case in which the term state of the art was used.[59] The plaintiff argued that a safety device could and should have been fitted to the door. State of the art evidence was led by the defendant, establishing that the product complied with a standardised design which was in common use in the industry at the relevant time. The court stated:

> "It is not of itself negligence to use a particular design or method in the manufacture or handling of a product... which is reasonably safe and in customary use in the industry, although other possible designs... might be conceived which would be safer..." [60]

Proof of compliance with accepted practices will not, of course, be conclusive:

> "The fact that the custom of manufacturers generally was followed is evidence of due care, but

it does not establish its exercise as a matter of law. Obviously, a manufacturer cannot, by concurring in a careless or dangerous method of manufacture, establish their own standard of care."[61]

In another negligence case,[62] Judge Learned Hand articulated the principle thus:

"Indeed in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices....Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not justify their omission"[63]

Where the theory pled is implied warranty, considerations similar to those which influenced U.K. in the decisions noted earlier have been applied and so state of the art evidence has generally been held to be irrelevant. Thus, on the question of whether the implied warranty theory permitted a finding of liability on the part of a cigarette manufacturer for death by lung cancer of a user of the product, the Florida Court of Appeal stated:

"Upon the critical point, our decisions conclusively establish the principle that a

> manufacturer's or seller's actual knowledge of a defective or unwholesome condition is wholly irrelevant to his liability on the theory of implied warranty."[64]

In the view of the court, the only standard for measuring defectiveness in implied warranty was the product's:

> "actual safety for human consumption when supplied for that purpose."[65]

As in negligence cases, proof of compliance with industry practice will not be conclusive in a strict liability suit. For example, in Gelsumino v E.W Bliss and Co.,[66] the plaintiff was injured when operating a punch press, having slipped and so inadvertently touched a floor pedal which set the machine in motion while his hand was under it. Rejecting evidence which sought to establish that the design accorded to industry practice the court stated that strict liability could not be avoided

> "by attempting to show merely that they had done what the rest of the industry had done to make their products safe."[67]

Thus, it followed that

"the state of the art defence is irrelevant to the two strict liability counts.... Conformity to the state of the art is not a defence to a claim involving an unreasonably dangerous product."[68]

While all state jurisdictions accept that simple compliance with industry practice is not conclusive and hence is not a defence to a strict liability action, some are prepared to treat compliance as setting up a presumption of non-defectiveness in negligence and in strict liability actions.[69] Some states permit a similar presumption where the product complies with governmental or legislative regulatory standards. The existence of such a presumption, although rebuttable, weighs heavily against the plaintiff.[70]

Most courts are prepared to admit evidence of industry practice as part of the enquiry into the question of defectiveness. Reed v Tiffen Motor Homes, Inc. [71] is illustrative of the majority view. Here the plaintiffs appealed inter alia on the grounds (a) that the trial court had erred by admitting evidence regarding state of the art into a case sounding solely in strict tort liability; and (b) that the court's instruction to the jury was in error because it allowed the jury to consider state of the art and industry standards when deciding if the product was defective and unreasonably dangerous. In affirming the judgment of the trial court it was stated that:

"We find that the state of the art and trade customs are relevant in helping the jury make a determination of whether the product is unreasonably dangerous when used in a manner expected by the ordinary consumer in the community. While only one element in that determination, it is a necessary aid to assist the trier of fact in determining the reasonableness of the manufacturer's design." [72]

Similar reasoning prevailed in Robinson v Audi NSU Auto Union Atkiengesellschaft and Volkswagen of America, Inc.,[73] where the plaintiffs were severely burned following a rear end collision involving their Audi automobile. They alleged that the car was defective and unreasonably dangerous because the fuel tank was so positioned as to easily be punctured by the contents of the trunk when impacted from behind. In this appeal, the plaintiffs argued that considerations of customary designs were largely irrelevant to strict liability. However, the plaintiffs had themselves

"introduced numerous exhibits depicting alternative fuel tank designs in use on other cars."[74]

The court agreed with the view expressed in Cantu v John Deer Co.[75], that where the plaintiff with his evidence makes state of the art an issue, the bdefendant is entitle to respond, and went on:

"This circuit has made it clear that although of limited use in products liability actions, state of the art evidence may be admitted for certain purposes. In Bruce v Martin-Marietta Corp., we held that in product liability actions, 'the plaintif must show that the product was dangerous beyond the expectations of the ordinary consumer. State of the art evidence helps to determine the expectation of the ordinary consumer.' In the case of Smith v Minster Machine Corp.,this court ruled that although compliance with the custom or practice of an industry is not an absolute defence to a strict liability action, the state of the art employed by the industry is relevant in determining the feasibility of other alternatives..., Just as plaintiff could use state of the art evidence to try to show the feasibility of other safer alternatives, defendants could use state of the art evidence to attempt to establish the expectations of a reasonable consumer."[76]

In a minority of jurisdictions, including Illinois, Pennsylvania and California there is some authority for the proposition that state of the art evidence of the type discussed in this section is generally inadmissable. Horn v General Motors Corp. [77] furnishes an illustration. Mrs Horn was involved in a car accident. While struggling to avoid the collision, she drew her hand across the steering column,

dislodging a cap which fitted over the horn mechanism. Three sharp prongs were thereby exposed. As the car crashed she was thrown forward, striking her face against the exposed prongs. The court found the car to be defective, and not only held that state of the art was not a defence, but also rejected as inadmisable evidence of industry practice.

Feasibility of safer design

Almost any type of product could have been made to be more safe. Few courts are prepared to hold that a manufacturer must guarantee the absolute safety of his product, and so proof of the fact that a safer design was possible will not alone indicate a finding of defectiveness. However, many courts admit of what they often describe as state of the art evidence in support, or in rebuttal, of the argument that it was technologically or economically feasible for the producer to have made a safer product. [78]

Many of the cases which have involved state of the art evidence have arisen in the context of feasibility of a safer design. These commonly involve claims that safety features were absent from and reasonably ought to have been incorporated in manufactured products. As such this major class of cases should be distinguished from the situation in which a defect is argued to have been scientifically undiscoverable; here, the defendant will

argue either that a known risk in a product could not have been discovered or eliminated, or that the risk was unknown and unknowable. Scientifically undiscoverable defects are covered in the next section.

In negligence cases, US courts have employed concepts familiar to those of Scots and English law in seeking to establish what would have been reasonable care in the circumstances. Many have taken it to be implicit in the use of the adjective 'reasonable' that risks must be weighed against benefits. In this balancing process, factors other than safety in the absolute sense become important. Thus, the feasibility of an alternative safer design will commonly be an issue. In implied warranty actions evidence concerning the feasibility, or lack of feasibility, of greater safety will of course be irrelevant.

Where a product case is tried under a strict liability theory, the question of feasible design alternatives is very often a crucial element in the decision.[79] Most jurisdictions in the US employ the criteria provided in s402A of the Restatement (Second) of Torts in order to determine defectiveness: thus, a product must be 'in a defective condition unreasonably dangerous to the user or consumer'. Comment I to s402A goes on to state that;

> 'The article sold must be dangerous to an extent beyond that which would be contemplated by the

ordinary consumer who purchases, with the ordinary knowledge common to the community as to its characteristics'

However, the section makes it clear that the exercise of all possible care will not preclude a finding of defectiveness:

"The rule stated in Subsection (1) applies although (a) the seller has exercised all possible care in the preparation and sale of his product"

In interpreting s402A's test for liability two broad judicial approaches are discernable; one is to extrapolate a set of factors which have to be weighed in a cost-benefit or risk-utility calculus while the other is to employ a test based upon the reasonable expectations of the consumer.[80] Most jurisdictions now take the former line, and of those which take the latter, the majority use a consumer expectation test in conjunction with a risk-utility model.[81]

a) The Consumer Expectation Test.

Use of a consumer expectation such as that posited by Comment I to s402A quite clearly raises a number of issues regarding the state of the art. For example, it may be argued that a consumer apprised of ordinary knowledge acquired from the use of products could not

expect an as yet untried design. Consumers, whether particularly or generally, may have no expectations regarding the dangerous characteristics of a product or of design alternatives. In addition, the consumer expectation test may be sonmething of a trap for consumers - state of the art evidence which establishes that a product is similar in design to others of the same type could be used to show that, since a number of other products were designed in the same way, the consumer should have realised the danger.

Olson v Arctic Enterprises,Inc.,[82] neatly illustrates the relationship between state of the art and consumer expectations. Olson alleged that he had been injured as a result of a design defect in a snowmobile made by the defendant company. Evidence was led by the the defendants to establish that other snowmobiles were of similar design. It was held that the vehicle, although capable of causing harm, was not defective since it did not present a danger which would not be anticipated by the ordinary consumer.

Similarly, in Reed,[83] supra, the court referred to Comment I to s402A and stated:

> "While the practice of considering the ordinary consumer's expectation has met with criticism...it is the law in South Carolina...Further the South Carolina court has explicitly set forth the

> requirement that a product must be unreasonably dangerous to a consumer with the ordinary knowledge of the community and has held products not to be unreasonably dangerous if the design failed to provide a safety feature outside what the consumer might expect."[84]

In Robinson,[85] supra, state of the art evidence was similarly allowed in order to establish the expectations of a reasonable consumer. Bruce v Martin-Marietta Corp.[86] further illustrates the point:

> "There is 'general' agreement that to prove liability under s402A the plaintiff must show that the product was dangerous beyond the expectation of the ordinary consumer. The state of the art evidence helps to determine the expectation of the ordinary consumer. A consumer would not expect a Model T to have the safety features which are incorporated in automobiles made today. The same expectation applies to airplanes. [The] plaintiffs have not shown that the ordinary consumer would expect a plane made in 1952 to have the safety features of one made in 1970."[87]

So, where a consumer expectation test is employed, state of the art evidence can be a decisive factor. But the use of consumer expectations in this way is open to a number of objections. In particular, it could be

argued that where a danger is patent or obvious a consumer can expect no more than the standard of safety offered by the product. This patent danger rule is an important objection to the consumer expectation test. A further difficulty is that the average consumer may have no real idea about the safety or dangerousness of the product being used.[88] It seems highly speculative to attempt to guage the expectations of an ordinary consumer as regards the safety of for example the aeroplane in Martin, above. Another major difficulty about the consumer expectation test is the confusion regarding whether the test is subjective or objective.[89] As noted earlier, in his dissenting judgement in Lester v Magic Chef, Inc.,[90] Justice Praeger stated that the consumer expectation test is not an objective test, and went on to say that it was bound to produce inconsistent verdicts in comparable cases [91].

There is then a temptation for courts to decide that a consumer could only expect the safety offered by the particular product, either because the danger is obvious, or because the consumer can have no valid expectation of safety from a complex product such as an aeroplane. The consumer expectation makes it difficult for state of the art evidence regarding feasible design alternatives to be convincing.

b) The risk-utility test.

A number of US jurisdictions have either completely eschewed the consumer expectations criterion for defectiveness in favour of the extrapolation of a set of factors which have to be balanced in a risk-utility calculus, or have used a two-pronged test employing both consumer expectations and risk-utility.[92]

Despite the severe judgmental difficulties which are inherent in a risk-utility decisional model, the technique is widely used. Where it is used state of the art evidence about the feasibility of design alternatives is a central feature of the balancing process.

Cepeda v Cumberland Engineering Co.,[93] illustrates the use of a common decisional model, that proposed by Dean Wade.[94] The components of the risk-utility analysis are:

(1) The usefulness and desirability of the product - its utility to the user and to the public as a whole.

(2) The safety aspects of the product - the likelihood that it will cause injury, and the probable seriousness of that injury.

(3) The availability of a substitute product which would meet the same need and not be unsafe.

(4) The manufacturer's ability to eliminate the unsafe character of the product without impairing the usefulness or making it too expensive to maintain its utility.

(5) The user's ability to avoid danger by the exercise of care in the use of the product.

(6) The user's anticipated awareness of the dangers inherent in the product and their avoidability, because of the general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.

(7) The feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying insurance.

Elements 3 and 4 in the above list very clearly involve considerations of state of the art as used in the current context. Thus, in Reed,[95] supra, it was said that:

"In design cases South Carolina has held that while any product can be made more safe, the fact that it is not does not automatically make the product unreasonably dangerous".[96]

The court then cited with approval dicta from an

earlier case:

> "In the final analysis, we have another of the law's balancing acts and numerous factors must be considered, including the usefulness and desirability of the product, the cost involved for added safety, the likelihood and potential seriousness of injury, and the obviousness of danger."[97]

State of the art evidence is only one element in the determination of whether a product is unreasonably dangerous, but

> "is a necessary aid to assist the trier of fact in determining the reasonableness of the manufacturer's design."[98]

Certain states take a more restrictive view and demand that the plaintiff prove, and be supported in this by the jury, that a safer, feasible design alternative was available. Thus, in Lolie v Ohio Brass Co.,[99]it was held that a design defect strict liability action placed upon the plaintiff the burden of adducing:

> "proof that, inter alia, (1) the product as designed is incapable of preventing the injury complained of; (2) there existed an alternative design that would have prevented the injury; and

(3) in terms of cost, practicality and technological possibility, the alternative design was feasible."[100]

Attempting to show that, on balance, an alternative design is safer and feasible can of course present a great challenge to the plaintiff. For example, in Korli v Ford[101], evidence showed that had the product, a motor vehicle, been equipped with front hinged rather than rear hinged doors, then in the circumstances of the case it would have been more safe. However, this was not enough to characterise the product as defective since front hinged doors were proved by the defendants to be more dangerous in other situations. Similarly in Olson,[102] supra, the snowmobile case, it was argued that, had rubber tracks been used on the vehicle, less damage would have been done to the injured plaintiff. However, this evidence was counteracted by expert testimony to the effect that such a track was more susceptible to breakage, which would render the vehicle less safe in other situations, for example by stranding the user in a wilderness. Again, in Wilson v Piper Aircraft Corp.[103], the plaintiff alleged that an aeroplane engine was defective in that, since a carburrettor rather than a fuel injector was used, fuel system icing was possible. The court rejected this view. Although use of a fuel injector would have decreased the chance of icing it would have rendered the aeroplane less safe in other respects and would

adversely have affected utility and price.

It is also clear that a product can be defective even where there is no feasible design alternative and no evidence of such is brought by the plaintiff. Many courts have insisted upon the plaintiff adducing evidence of feasible alternatives[104], but this is of course too extreme a position since a product may simply be unreasonably dangerous and have no alternative design. This was the view adopted in O'Brien v Muskin Corp.[105], where the plaintiff suffered head injuries when he dived into an above-ground swimming pool. The pool was lined with vinyl, and the plaintiff alleged that the vinyl was so slippery as to cause his outthrust arms to separate and thus to cause his head to strike the bottom. No evidence showing the feasibility of an alternative design was presented by the plaintiff. Nevertheless, the New Jersey Supreme Court held that even in the absence of an alternative method of making bottoms for above-ground swimming pools, the jury might find that the risks posed by the product outweighed its utility.

O'Brien has been criticised as going too far[106], but the principle which it asserts is eminently reasonable. The difficulty is with the application of the principle to cases such as O'Brien , in which a relatively popular product is exposed to the threat of being found to be defective. In the case itself, there was a

separate allegation of failure to provide an adequate warning despite the presence of the words "DO NOT DIVE" in 1/2 inch high letters on the side of the pool. The jury decided that the warning given was inadequate, but found that the injury suffered was apportionable 85% to the plaintiff's conduct and 15% to the failure adequately to warn. Under New Jersey law, comparative negligence of this type is a bar to recovery and so the plaintiff failed. On appeal, the decision of the trial court was reversed, on account of its having removed the design defect issue from consideration by the jury. The New Jersey Supreme Court held that the jury ought to have been given the issue of design defect for decision and ordered a retrial. Some commentators have expressed the view that, because the failure to warn and design defect claims can stand independently, a decision that the warning was adequate would not preclude a further finding of design defect. [107]

> "..courts may rely on O'Brien to declare defective in design a product used in millions of American homes even though the manufacturer provides adequate warning of the risks involved in its misuse and the plaintiff fails to present any evidence of an alternative design that would render the product safer."[108]

Although technically possible, such a finding would be alarming in that it would hold that a product was not

defective because of an adequate warning but was defective in design. While this is not an approach likely to be accepted, it is submitted that the decision itself is quite correct; if those who criticise it think that a court ought not to be able to declare a product to be defective simply because no safer alternative can be found, they are leaving the way open for the production of dangerous items which could never be found to be defective.

One real difficulty which faces courts which employ a state of the art defence based upon consideration of feasible design alternatives is the lack of clarity in the meaning of feasibility. Feasibility may be thought to take into account more than simply the technological possibility of implementing the safer design, and may thus be taken to include considerations of cost, marketability, and the need for the safer design to fit easily into a mass production method. [109] But this is too wide a definition of feasibility and use of it effectively re-opens the whole question of defect.[110] Even on the narrower meaning of feasibility - the technological possibility of implementing the safer design - difficulties arise. It may be argued, for example, that the relevant scientific principles simply are unknown, or it may be contended that even though the principles are known the method of implementation of the principles in re-designing the instant product is not known. There are

bound to be difficulties of proof in establishing the time at which application of the principles became known, raising important issues about the availability of knowledge which has been generated by, for example, some scientist at a foreign university, but which is not readily available.

Thus, in cases involving feasibility of safer design alternatives, there will often be a need to establish the boundaries of available knowledge. An important issue here is the determination of the appropriate time at which defectiveness is to be adjudged[111]. At what stage is the feasibility of an alternative design to be measured - time of trial or time of distribution of the product, or some other time? It is now clear that the majority of jurisdictions accept time of distribution as the apprpriate time[112]. This appears to derive from the very meaning of feasibility, which smacks of 'contemporary perceptions and priorities'[113]. These courts have rejected, often in colourful terms, the argument that with hindsight the product could have been made more safe. Echoing the view expressed in Bruce v Martin-Marietta Corp.[114] , that

> "A consumer would not expect a model T to have the safety features which are incorporated in automobiles today"[115]

the New Orleans federal district court has noted that

the law does not expect Saturday manufacturers to have the insight available to Monday morning quarterbacks. [116]

Similarly, in Balido v Improved Machinery, Inc.[117],it was held that

> "Strict liability for deficient design is premised on a finding that the product was unreasonably dangerous for its intended use, and in turn, the unreasonableness of the danger must necessarily be derived from the state of the art at the time of design."[118]

Finally, in Boatland of Houston, Inc v Bailey[119]

> "scientific knowledge, economic feasibility and the practicalities of implementation when the product was manufactured"[120]

were the key elements in deciding whether an alternative safety device ought to have been used.

(iii) Undiscoverable risks and unknown risks

It was noted earlier that questions of feasibility of safer designs arise, in particular, in cases where manufactured products of a non-chemical nature are

challenged as defective. Ordinarily, the question is whether a safer material could have been used, or a safety feature incorporated in the product, or a safer situation of design features used. Questions of undiscoverability of a risk, or the unknowability of a risk more commonly arise where substances such as chemical or pharmaceutical products are involved.

Let us first of all seek to define the relevant terminology here. The term undiscoverable connotes a risk that is known, or suspected, to be present in the product, but, effectively, both the presence of the danger in particular samples of the product and the means of elimination of the danger are undiscoverable. Thus, arguments about undiscoverability tend to be raised in manufacturing defect cases: there is a flaw in a particular sample or individual product, but the bulk is not affected. It is a trite observation that in warranty undiscoverability is no defence, while even in negligence the presence of a manufacturing defect raises a strong inference of culpability, and so it would be expected that in strict liability there would be little room for the undiscoverability usage of the state of the art defence.

Where by quality control or other testing techniques discovery of the danger was possible, arguments about undiscoverability will largely be untenable. But a manufacturer may argue that he cannot be expected to

test every product, or that testing involves destruction of the product, and so, that even with the best quality control procedures existence of the flawed product was undetectable. Similarly, it may be argued that there was no known means of testing for the type of defect present in flawed items. For example, in Cunningham v MacNeal Memorial Hospital[121], the plaintiff had contracted serum hepatitis from a blood transfusion. It was argued for the hospital and accepted by the court that a small number of blood transfusion patients would contract hepatitis because at the time of transfusion and at the time of trial there was no known means of identifying the presence of the virus. No way of eliminating the risk was known. The Illinois Supreme Court held the blood to be impure and found for the plaintiff, stating in a much quoted part of the judgement:

> "To allow a defense to strict liability on the ground that there is no way, either practical or theoretical, for a defendant to ascertain the presence of impurities in his product would be to emasculate the doctrine [of strict liability] and in a very real sense would signal a retreat to a negligence theory."[122]

This decision is out of step with a number of others in which courts have taken the view that contaminated blood is unavoidably unsafe and hence afforded the

exemption from strict liability which comment k to s402A gives to such products. [123] Also, the effect of the decision was, on grounds of public policy, immediately reversed by statute in Illinois[124], a practice adopted as regards blood products by many other states.[125] The mechanism by which states deny recovery under a strict liability theory is either expressly to exclude blood transfusion from strict liability, or to provide that transfusion is a service rather than a sale of a product, thus taking the supply outside any strict liability regime based upon s402A, which requires a sale for the imposition of strict liability.

Accordingly, the fact pattern of Cunningham will not now in most states give rise to liability, and indeed patients who have contracted AIDS from blood or blood products have been denied recovery under a strict liability theory.[126] Nonetheless, he Cunningham decision is of interest since it illustrates the presence of known but undiscoverable dangers. Similar dangers exist in pork products in which trichinae are present, causing trichinosis. Only the most microscopic examination of the carcass can detect the presence of the danger[127], and in some such cases liability has been denied on undiscoverability grounds[128]. The major difficulty with the denial of recovery in these circumstances is in distinguishing other instances in which manufacturers may assert undiscoverability, such

as where testing would destroy the product, or where a foreign body - such as a snail - finds its way into a manufactured product. [129] The better view, it is suggested, is to impose strict liability for all such manufacturing defects and to exclude by statute only those products which public policy demands should be outwith strict liability.

Undiscoverability, in the discussion above, relates to known, or suspected, product dangers. A separate class of cases have involved unknown and unknowable dangers. Clearly, semantic difficulties bedevil this whole area. As Wade has observed:

> "If something has now become known does that not mean that it was discoverable at the earlier time? Questions of this sort tempt one to cut the Gordian knot in frustration and to say that anything now known was knowable at the earlier time."[130]

Thus, it may be necessary to use an alternative term, such as scientifically available knowledge [131] as the basis for a formulation of a liability criterion. Whatever the terminology, the question is whether a manufacturer ought to incur liability in respect of product dangers which were unknown and in the light of scientifically available knowledge incapable of being known at the time of distribution.

A number of decisions support the proposition that unknowability of the risk is irrelevant in a strict liability claim[132]. In these cases, knowledge of the risk has of course become known - hence the claim in the first place - and the court effectively takes the view that the manufacturer should be imputed with knowledge of the dangerous character of the product as known at the time of trial. This could be described as the 'doctrinal elegance' view - the central point in strict liability is the objective matter of whether the product is defective, the fact that the manufacturer was unaware of the existence of the defect being irrelevant to the inquiry. Strict liability is about the condition of products not about the conduct or knowledge of manufacturer, although even here considerations of the reasonableness of the manufacturer's conduct can play a part. On this reasoning, Dean Keeton suggests that a product be found to be unreasonably dangerous

> ".. if and only if a reasonable man, with knowledge of the condition of the product and an appreciation of all the risks as found to exist at the time of trial, would not now market the product at all, or would do so pursuant to a different set of warnings or instructions as to use."[133]

The producer in such cases is imputed to have known

that which at the time of distribution was outwith the realm of scientifically available knowledge.

Beshada v Johns-Manville Products Corp. [134], discussed earlier,is the leading modern example of this kind of attitude. Some fifty-one plaintiffs argued that the manufacturers and sellers of asbestos ought to incur strict liability for failure to warn of the defects inherent in the product. The defendants contended that the scientific and medical community did not know that insulation products containing asbestos posed a threat of causing asbestos-related disease. It was argued as knowledge of this danger was not established until the 1960's the defendants had no duty to warn prior to that time. The New Jersey Supreme Court assumed as correct the defendants' claim that the dangers were unknowable. Under reference to Freund v Cellofilm Properties[135] and Cepeda v Cumberland Engineering Co.[136], the court reasoned that in a failure to warn case the product was defective if its risks had not been reduced to the greatest possible extent. Adopting a doctrinally pure approach to strict liability, the court took the view that the limits of scientific discoverability did not affect the question of defectiveness. In support for this purist view, the court cited with approval Dean Keeton's comment;

"...if a defendant is to be held liable for a risk discoverable by some genius but beyond the

> defendant's capacity to do so, why should he not also be held liable for a risk that was just as great but was not discoverable by anyone?"[137]

It was accepted by the court that decisions such as Freund above had failed fully to resolve the matter of relevant time at which knowledge was to be imputed to the manufacturer - time of trial or time of manufacture. Strict liability, in the court's view, demanded that the knowledge of the product's dangers as known at the time of trial be imputed to the defendant. Much emphasis was laid on the policy aims of strict liability, and the distinction between a strict liability theory and a negligence theory.

In some other state jurisdictions, similar reasoning to that employed in Beshada has been used to support a finding of liability. For example, in Elmore v Owens-Illinois[138] the Supreme Court of Missouri held that state of the art evidence to the effect that the defendants could not have known of the dangers presented by their product was irrelevant in a strict liability claim. In Missouri, the test for defectiveness is the consumer expectation test drawn from s402A. Applying this test, and focusing on the policy goals of strict liability, scientific unknowability was, held by the court,to be no defence.

Developments in New Jersey subsequent to Beshada have,

however weakened the authority of that decision. In particular, in Feldman v Lederle Laboratories[139], another strict liability failure to warn case, noted earlier, the court stated:

> " If Beshada were deemed to hold generally or in all cases....that in a warning context knowledge of the unknowable is irrelevant in determining the applicability of strict liability we would not agree."[140]

The opinion goes on to cite a number of academic articles critical of Beshada, and restricts the case 'to the circumstances giving rise to its holding'[141]. In Feldman, the court relied upon Freund, supra, to the effect that reasonableness of the manufacturer's conduct was relevant in a strict liability claim of this type, and that the state of available knowledge was a consideration in determining reasonableness of conduct. The manufacturer was held to the standard of an expert and was thus deemed to know all dangerous propensities of the product which were reasonably knowable. The imputation of this knowledge distinguished strict liability from negligence. In addition, the Feldman court placed the burden of proving the lack of available knowledge on the manufacturer.

As was noted in the earlier discussion of the warnings

issue, it is by no means clear what the effect of the Beshada - Feldman dichotomy is, even in New Jersey. It may be that Beshada is restricted to asbestos products and Feldman is restricted to pharmaceuticals. Also, Feldman appears to authorise the view that proof by the manufacturer of unknowability of the defect is a complete defence in a failure to warn claim, in contrast to O'Brien,[142] supra, which uses lack of feasibility of a safer design as one factor in the risk-utility analysis.

Beshada's doctrinal elegance approach is attractive, although the extent to which the decision furthers the policy aims of strict liability can be questioned. It may also be argued that the doctrine of strict liability has no 'profound and sacrosanct theoretical basis'[143] and that elegance of construction should not defeat pragmatic considerations[144].

Pragmatism has influenced courts such as that in Feldman to allow evidence that the defect was scientifically unknowable to exculpate the manufacturer. In taking this line, some courts have relied upon Dean Wade's view, contrasting with that of Keeton, quoted above, that for the purposes of strict liability the defendant be imputed with knowledge only of defects that were scientifically knowable at the time of distribution.[145]

Before exploring the policy arguments underpinning the Beshada - Feldman dichotomy, and pertinent to all uses of state of the art evidence, some brief comment must be given about such evidence in the context of the distinctions between manufacturing defects, design defects and failure to warn. Also, US courts generally treat as a separate category 'unavoidably unsafe' products and this separate treatment merits some consideration.

Manufacturing defects, design defects, and failure to warn

American product liability law, as was made clear earlier, classifies product defects as fitting into one of the following three types; a) manufacturing defects, where some failure in quality control or in the manufacturing process has caused the flaw in the product. Here, the product fails to match the standard of the other products of the same type produced by the manufacturer. b) design defects, where some design deficiency such as the absence of a safety feature or the improper siting of a part of the product is present. c) failure to warn, where the deficiency alleged is an inadequacy in or absence of a proper warning.

Failure to warn cases are often described as similar if not identical to design defect cases, in the sense that

the warning is but one feature of the product's overall design. However, as was noted earlier, many plaintiffs are keen to litigate on warning rather than general design grounds and there was an explosion of warnings cases during the 1970's.

Of the uses of the term state of the art in relation to the types of product defect just stated, the following general guidelines can be identified. Where there is a manufacturing defect, the main use of state of the art evidence is to argue that the defect was scientifically undiscoverable. The potential for the presence of the manufacturing defect is known, but the means of detecting or eliminating the defect are not known. As suggested above, it is only where public policy dictates that liability ought not to be imposed - such as, arguably, the hepatitis in blood cases - that an exception should be allowed from the rule of strict liability for manufacturing defects, although an appropriately worded warning would elide liability.

Where the defect is one of design, state of the art evidence will often be led in order to establish or disprove the feasibility of an alternative design. Knowledge issues commonly will not arise in these cases, since often the dispute will concern use of particular materials, the presence or adequacy of safety features, or positioning of parts of the product. Bu there may well be cases involving

feasibility in which knowledge issues are raised, for example where the possible application of a particular technique was not scientifically known at the relevant time or where the product behaves in a wholly unforeseen way. Here a test of what knowledge was scientifically available will help solve the question of defect. Such cases will involve known risks; it is the means of reducing or avoiding the risk which is argued to be unknowable. A consumer expectation test alone, or a risk utility test alone, or a test drawing on each of these, will be used to determine the question of defectiveness.

State of the art evidence as used in manufacturing and design defect cases thus becomes part of the very inquiry into defectiveness; it is relevant in helping to determine consumer expectations and it is an important element in risk utility analysis. It is of central importance to notice that state of the art evidence of this type will not generally involve unknown and unknowable risks, which it will later be argued is the true province of the development risk defence in our new regime.

Where the theory upon which the plaintiff's argument is based is failure to warn, state of the art evidence can play a rather different role to that discussed above. In cases where there is an allegation of an inadequate warning or a lack of warning against <u>known</u> dangers

there is no real difference from the role played above. Here the use of state of the art evidence is very similar to that in design defect litigation. Warnings are viewed as one part of the product's overall design and evidence of industry custom or feasibility of alternatives is fed into a risk-utility or consumer expectation test for defect. Where, however, there is a failure to warn case involving unknown and unknowable dangers the majority of states adopt a view similar to that in Feldman to the effect that proof of the unknowability of the danger at the time of distribution will be wholly exculpatory of the defendant manufacturer. As noted, a minority, represented by decisions such as Beshada are prepared to impose liability for failure to warn of unknowable dangers.

It is important to note that the cases discussed above, in which unknown and unknowable dangers have been presented by products, have involved chemical products such as asbestos or pharmaceuticals. It may be observed that these products form the major, if not the only, class of product involving unknown and unknowable risks. This is the true field of development risk liability.

Unavoidably unsafe products

A discussion of state of the art evidence in US cases would be incomplete without reference to that category

of product which is labelled 'unavoidably unsafe'. Comment k to s402A provides:

> "There are some products which, in the present state of human knowledge, are quite incapable of being made safe for their intended and ordinary use. These are especially common in the field of drugs. An outstanding example is the vaccine for the Pasteur treatment of rabies, which not uncommonly leads to very serious and damaging consequences when it is injected. Since the disease itself invariably leads to a dreadful death, both the marketing and the use of the vaccine are fully justified, notwithstanding the unavoidable high degree of risk which they involve. Such a product properly prepared, and accompanied by proper directions and warning, is not defective, nor is it unreasonably dangerous. The same is true of many other drugs, vaccines, and the like, many of which for this very reason cannot be legally sold except to physicians, or under the prescription of a physician. It is also true in particular of many new or experimental drugs as to which, because of lack of time and opportunity for sufficient medical experience, there can be no assurance of safety, or perhaps even of purity of ingredients, but such experience as there is justifies the marketing and use of the drug notwithstanding a medically recognizable risk. The seller of such products,

> again with the qualification that they properly prepared and marketed, and proper warning is given, where the situation calls for it, is not to be held to strict liability for unfortunate consequences attending their use , merely because he has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk."

There have been many cases in which the exoneration from liability whuch comment k gives has been sought by manufacturers[146]. Rather than pursue a full exegesis of these authorities it will be more valuable to confine our discussion of comment k largely to its treatment in some of the leading cases already discussed.

The question of whether a product is unavoidably unsafe depends, for the purposes of comment k on two separate factors: firstly, the risk must be unavoidable under the present state of human knowledge; and, secondly, such experience as there is must justify the marketing and use of the product. Each of these components demands use of state of the art evidence as to the unavoidability of the danger.

Clearly, the exemption given by comment k will often be sought by the manufacturers of pharmaceutical products. Basko v Sterling Drug, Inc.[147] is frequently cited in

illustration of such use of comment k. The plaintiff took three different drugs in treatment of a skin disease. As a reaction to the presence of chloroquinine in two of the drugs, which he had been taking for some years, the plaintiff suffered an impairment of vision resulting in near blindness. Denying strict liability, the court held that the product was unavoidably unsafe within the meaning of comment k. The comment speaks of the presence of a proper warning, and this was taken by the court in Basko to import a negligence standard as regards unavoidably unsafe products: if the danger is detectable by the exercise of due care then a warning is necessary.[148]

Comment k's protection was also invoked in Cunningham v MacNeal Memorial Hospital[149], the hepatitis case discussed above. Responding to the defendant's argument that comment k applied, the court stated that the protection afforded did not apply where a product was impure as in the instant case. The comment was held to relate only to products which are not impure[150]. This pure/impure distinction is similar to that between manufacturing and design defects. However, it is difficult to distinguish between the contaminated blood in Cunningham and the Pastuer vaccine mentioned in comment k itself. In Hines v St. Joseph's Hospital[151], the New Mexico Court of Appeals critised the Cunningham decision and declined to follow its reasoning. In Hines as in Cunningham the plaintiff had

contracted hepatitis from blood, and the court took the view that comment k ought to apply in exoneration of the manufacturer from strict liability. According to Hines, comment k clearly does apply to impure products since the comment uses the phrase 'or perhaps even purity of ingredients'[152].In a risk utility analysis, the blood was not defective. These cases show the difficulty of determining the scope of comment k, and in particulr Hines illustrates that undiscoverable but known dangers can be covered by the comment. This arguably extends too far the ambit of the protection offered. [153]

The negligence standard of liability which would apply were comment k to exclude prescription drugs from strict liability, was argued to be the appropriate standard in Feldman v Lederle Laboratories[154] . However, the court took the view, which it is suggested is apparent from the tenor of the comment itself, that not all prescription drugs are unavoidably unsafe for the purposes of comment k:

> "Comment k immunizes from strict liability the manufacturers of some products, including ceratin drugs, that are unavoiably unsafe. However, we see no reason to hold as a matter of law and policy that all prescription drugs that are unsafe are unavoidably so. Drugs, like any other products, may contain defects that could have been avoided by

> better manufacturing or design. Whether a drug is unavoidably unsafe should be decided on a case by case basis; we perceive no justification for giving all prescription drug manufacturers a blanket immunity from strict liability manufacturing and design defect claims under comment k.
>
> Moreover, even if a prescription drug were unavoidably unsafe, the comment k immunity would not eliminate strict liability for failure to provide a proper warning.....Irrespective of whether a court or a jury decides that the drug falls within the special category of comment k, that finding may not absolve the manufacturer of its failure to warn the physician or the consumer of the condition within the manufacturer's actual or constructive knowledge affecting the safety, fitness or suitability of the drug." [155]

Accordingly, pharmaceuticals may contain defects which should have been eliminated or properly warned against and strict liability will often be appropriate. The question as to whether a drug is unavoidably unsafe will therefore be decided on a case by case basis. Cases like Feldman indicate a rather limited role for the category of unavoidably unsafe products in US product liability litigation.

Finally, it is of central importance to observe that comment k simply makes it clear that on a risk-utility

balance the products to which it applies are not defective or unreasonably dangerous; the comment does not introduce a defence to a finding of defectiveness, it holds that, in appropriate circumstances, and for a limited class of products, benefits outweigh risks.

State of the art/development risks - the policy choices

What lessons can our regime of strict liability draw from this American experience of the use of state of the art evidence? Immediately, it should be observed that two of the major uses of this evidence in the US - establishing industry practices, and establishing feasibility or the lack of feasibility of an alternative design - ought to be relevant in our regime in the determination of defect, rather than as a defence to a finding of defect. In other words, the simple distinction set out earlier in this chapter between known dangers and unknown dangers is the key to discovering what assistance can be obtained from the US cases. If the danger is known, then evidence about the current state of scientific knowledge will be relevant to a determination of whether detection of the presence of the risk in a particular batch, or a method of elimination -of the risk, is within possibility. These cases will not involve the development risks defence, since the evidence will concern defectiveness in the first place. Here there is a known danger, and an adequate warning will often preclude a finding of

defectiveness.

State of the art of the type just discussed is therefore about known risks, while development risks concerns risks which are unknown and which could not have been known. Of the types of state of the art evidence discussed above, the last category - cases such as Feldman and Beshada - will be those which involve the defence. This does not necessarily mean that it is only chemical products such as pharmaceuticals which allow use of the defence, although these will certainly be the main instances of its use.

The overriding difficulty, it is suggested, is that as currently worded our development risks defence will permit manufacturers to bring evidence of industry practice and feasibility as a defence to a finding of defectiveness. In other words, the use of such evidence fails at the 'defect' stage, but is then used to show what a manufacturer of products of the same description might be expected to have discovered. The UK courts may well find it impossible to restrict the defence to dangers which were unknown and which could not have been known. Before offering some concluding comment on the use of the defence under the 1987 Act, it is worth exploring the policy reasons underpinning the imposition of liability for unknown and unknowable dangers, followed by the policy arguments which led our

the UK Parliament to accept the defence as worded.

Beshada: - policy reasons for imposing strict liability for unknowable dangers.

The court in Beshada offered a number of policy reasons in support of its decision to impose strict liability even where the danger was unknown and unknowable[156]. It must be noticed however that the decision was limited to the context of failure to warn, and the court specifically declined to address the issue of whether a state of the art defence was appropriate to safety device cases. [157] An alternative way of looking at this, is that the court's policy arguments are pertinent to unknown and unknowable dangers and not to the feasibility of design alternatives. But dicta of the court strongly assert the purist approach to strict liability:

> "But in strict liability cases, culpability is irrelevant. The product was unsafe. That it was unsafe because of the state of technology does not change the fact that it was unsafe. Strict liability focuses on the product, not on the fault of the manufacturer."[158]

However, the court's view was that the most important inquiry was whether the imposition of liability for failure to warn of dangers which were undiscoverable at

the time of manufacture advanced the goals and policies sought to be achieved by strict liability[159]. Answering in the affirmative, the court cited three major policy reasons for its decision.

Firstly, risk spreading was seen as one of the most important arguments for imposing strict liability. Manufacturers and distributors are in the best position, reasoned the court, to bear the costs of injuries caused by defective products, by insuring against liability and reflecting the costs in the price. At the centre of strict liability, according to the court, lies the basic normative premise that manufacturers rather than victims ought to bear the cost of injuries. This argument ought not to be accepted uncritically, and in the case itself a number of cogent points were made in an attempt to rebut it. In particular, it was contended that imposition of liability for unknowable hazards cannot further the goal of risk spreading since, by definition, such hazards are not predicted and so the price will not have been adjusted so as to reflect the costs of injury. If the price was later adjusted to compensate for the unanticipated risk, later users would pay the increased price caused by compensating earlier victims. The court accepted that there was some truth in this argument, but said of its own finding that 'it is not a bad result.'[160] On balance, it is suggested that the court is correct. The risk certainly is spread, even if

only through future users rather than those, including the victim, who used earlier.

In further support of its finding the Beshada court cited the policy aim of accident avoidance:

> "By imposing on manufacturers the costs of failure to discover hazards, we create an incentive for them to invest more actively in safety research."[161]

Undoubtedly, the threat of liability for undiscovered defects will cause producers to seek out potential liability-triggering dangers, but it is arguable that this incentive does not arise when the defect was unknowable as well as unknown. It could also be argued that a traditional state of the art rule consisting of an obligation to stay abreast of the current state of knowledge provides a sufficient incentive to test products.[162] Some would even say that the imposition of liability for unknowable risks creates a positive dis-incentive to carry out safety research - if you are to be liable for all risks whether or not you could have discovered them, why seek to discover any risks? [163] This view may possess some superficial cogency, but looked at more closely it is a counsel of despair; any manufacturer who takes this line will be fortunate to survive.

The third policy matter of importance to the decision in Beshada was simplification of the fact finding process:

> "The analysis thus far has assumed that it is possible to define what constitutes "undiscoverable" knowledge and that it will be reasonably possible to determine what knowledge was technologically discoverable at a given time. In fact, both assumptions are highly questionable. The vast confusion that is virtually certain to arise from any attempt to deal in a trial setting with the concept of scientific knowability constitutes a strong reason for avoiding the concept altogether by striking the state-of-the-art defense.
> Scientific knowability, as we understand it, refers not to what in fact was known at any time, but to what could have been known at the time. In other words, even if no scientist had actually formed the belief that asbestos was dangerous, the hazards would be deemed "knowable" if a scientist could have formed that belief by applying research or performing tests that were available at the time. Proof of what could have been known will inevitably be complicated, costly, confusing and time-consuming. Each side will have to produce experts in the history of science and technology to speculate as to what knowledge was feasible in a given year.....we should resist legal rules that

will so greatly add to the costs both sides incur in trying a case."[164]

These are powerful words. Questions of available scientific knowledge, difficult at any time, are greatly complicated by the need to establish the state of such knowledge at some past date. However, these arguments were not found to be persuasive by the same court in Feldman, which of course refused to hold a manufacturer liable for failure to warn of an unknowable danger and restricted Beshada to the circumstances giving rise to its holding. The subsequent apparently arbitrary dichotomy between Beshada and Feldman has now, as was discussed in Chapter 4, reached the federal court of appeals where asbestos manufacturers have challenged the distinction on constitutional grounds.[165] Unfortunately, no real attempt was made in Feldman to rebut the policy arguments advanced in Beshada. Instead, reference was made to the many commentators who had criticised the Beshada decision.[166]

Some of these commentators have cited the apparent illogicality of Beshada in seeming to require a warning of that which could not have been known[167], and some also criticise the decision as imposing absolute liability.[168] Each is wrong: the apparent illogicality stems from the need for a strict liability theory to focus upon the product rather than the

conduct of the manufacturer; and absolute liability is not imposed - the manufacturer is liable only for unreasonable dangers. Other arguments against the Beshada holding include that it is unfair to the manufacturer, that accurate risk-spreading is not possible, that no real incentive to carry out more safety research is given, and that the trial process will not radically be simplified. On balance, however, it is suggested that the Beshada policy grounds outweigh the counter arguments. The only, and major, difficulty is the availability of insurance cover against unknowable risks and there is a lack of clear information about the ability of insurers to provide cover for such risks. That some asbestos manufacturers, including the defendants in Beshada, filed for bankruptcy under chapter 11 of the federal bankruptcy code as an attempt to stem the flow of legal actions againt them, may be an indication of the difficulties, in the US at least, of obtaining insurance cover.[169]

Policy issues and development risks in the UK

The question of whether the UK ought to adopt the defence of development risks, or derogate from that part of the directive, attracted passionate argument during the progress of the legislation through Parliament[170]. As noted above, the wording in the Act was the original wording of the Bill as introduced in

the House of Lords. That wording, different from the Directive, was described by the Minister as a clarification of the wording of the Directive. [171] In the House of Lords, the wording of the Directive was inserted in place of the government's version[172], but at the Committee stage in the Commons after only a brief discussion and no vote (which it seems clear the government would have won in any event) the government version was re-instated.[173] Fears expressed by industry dominated the brief discussion of the defence, and the imminence of the dissolution of Parliament for the pending general election truncated debate and forced a reluctant House of Lords to accept the Commons version lest the whole measure be lost.

Policy arguments for and against the defence were similar to those mooted in the US, and can broadly be grouped under the following heads:

(a) Innovation

It was argued that the defence was a vital part of the bill. Omission of the defence would inhibit British industry from producing new and innovative products. Manufacturers who have to face unquantifiable liabilities from unforeseen risks will be unwilling to invest in research and development for the future.[174] Most other Member States, it was argued, would be including the defence. Only Belgium, France and

Luxembourg would dispense entirely with the defence, and Germany would dispense with it only for pharmaceuticals. Without this defence, Britain would be at a disadvantage as against most of Europe.[175] Lord Denning, originally against the defence, changed his mind after reading about the development of an AIDS drug, and was concerned that without the defence such developments would be inhibited. Also, it was contended that much innovation comes from small companies, which financially are less well placed to obtain the necessary insurance cover.[176] It was even hinted that jobs could be lost if development of new products were to be inhibited. [177]

Against these points, it was noted that innovation does not appear to have been stifled in countries which do not permit the defence, such as the United States, or France, or as regards pharmaceuticals, in Germany. Furthermore, if some states permit the defence and others do not, those which include it , such as the UK, may become the testing ground for untried products.[178]

(b) Insurance

Availability of insurance, perhaps the central focus for debate, again divided the policy makers. On the one hand, it was stated that premiums would be prohibitively high were the defence excluded.[179] A

briefing paper from the Association of British Insurers was relied upon to assert that in most instances absence of the defence would not be a problem, but with a very few industries, which have a heavy development risk, such as pharmaceuticals and aerospace, the difference could be critical and the amount of capacity would be reduced.[180] The trend in the US towards exclusion of liability for risks that could not have been known, was pointed out, as were the financial ceilings upon total liability and special insurance arrangements used in Germany to provide cover for the pharmaceutical industry.[181]

On the other hand, it was argued that in countries where the defence is not available, adequate insurance arrangements have been made.[182] Further, our producers have had to obtain insurance cover, and will now need more cover, for export to those countries. This does not appear to have caused undue difficulty for the insurers.[183] There are no serious differences in insurance costs between such countries and ourselves.[184]As a compromise, it was suggested that the development risks defence be permitted only for high-risk sectors and not across the board. [185]

(c) Risk spreading

It was strongly urged that the manufacturer is in a

better position than the victim to meet the costs of injury. Insurance costs would effectively be met by all purchasers of the product. This, it was argued, was preferable to concentration of the risk on the unfortunates who suffer from product defects.[186]

> "It is a question of whether individuals who suffer grievous hardship and illness and who undergo terrible suffering shall have to bear their suffering alone and uncompensated, or whether the rest of us, who buy the same products, should not contribute."(Baroness Burton of Coventry)[187]

Others argue that, since insurance will be expensive if obtainable at all, risk spreading will be difficult. Again, where a danger previously unknown becomes known, it is only future consumers who will have the cost spread amongst them.

(d) Trial process.

Those who oppose the defence contend that its presence can only complicate and thus lengthen the trial of product liability cases. For the manufacturer to make out the defence, it was argued, he would need a number of expensive experts as witnesses to the state of knowledge at the relevant time.[188]. In a matter as difficult as the state of scientific and technical knowledge at a particular time, conflicting views from

pursuer and defence experts can be expected. Any person seeking to raise an action and concerned that a development risks defence will be used against him, may well be dissuaded by the costs resulting from a failure from pursuing his action.[189]

Conclusion

Development risks, a central and delicate aspect of the new regime, has been included as a defence in the 1987 Act. But the wording of section 4(1)(e) impedes what ought to be the true application of the defence - to unknown dangers which could not have been known. That the EC Commission felt obliged to quarrel in such strong terms with the wording in the Act is therefore no surprise.

The two points which are at issue regarding development risks are: ought there to be a defence of development risks in the first place? and, if so, what form ought the defence to take? As shown in the above discussion, the policy arguments have been quite fully canvassed, particularly in Beshada and in the parlaimentary debates. It is interesting to notice here the government's own policy aims for the regime of strict liability. The government stated itself to have been much influenced by the reasoning of the Pearson Commission, which cited the following practical and policy reasons for strict liability:

(a) All consumers should have the same protection as that enjoyed by the direct purchaser.

(b) The producer reaps benefits if the product is a success; he should also accept losses if the product fails and injures people (the doctrine of implied warranty).

(c) Strict liability would encourage higher safety standards.

(d) The producer is in the best position to arrange insurance cover, and can pass the extra cost to the consumer through the price mechanism.

(e) The strong European trend towards strict liability should not be ignored.[190]

It is difficult to see how the inclusion of a development risks defence furthers any of these aims; indeed, each could be taken to support the exclusion of the defence. However, the minister explained that more pressing policy reasons prompted the inclusion of the defence:

" We base our case for the retention of the development risks defence on three fundamental reasons. The first reason is that it is an integral part of the directive and an important part of the

harmonisation that the directive seeks to achieve.....one of the factors that it is important to bear in mind in considering questions such as competitive disadvantage is the context in which we are discussing these matters. The Bill, implementing the directive, is intended to introduce harmonisation. The purpose of the directive is to harmonise the law among member states of the European Community. That is important to bear in mind.

Secondly, we believe that not to have such a defence would stifle innovation. Thirdly,...not to have the defence would undoubtedly lead to serious problems with insurance.

Each of these reasons by itself would be highly persuasive. Taken together, we think - although I appreciate that genuinely held views may differ - that they amount to an unanswerable case."[191]

Expressing the desire to help victims of product defects in the emotional language used by some contributors to the debate does not help to produce the clarity of thought required for the consideration of the issues involved. But, even discounting for the emotive reactions, the Beshada reasoning is powerful. Only the clearest indication that the insurance industry cannot cope, or that the expense of coping would so increase the costs of products as to create

serious worries of inflation, ought to rebut that powerful reasoning. Unfortunately, the debates have been lamentably under informed on the insurance issues. Raising the spectre of a US style insurance crisis is disingenuous; it is common knowledge that features of their legal system which we do not possess, such as contingency fees, juries deciding on damages awards, and punitive damages in product cases, fuel the explosion of already over-inflated awards of damages. A much more sophisticated inquiry into the ability of the industry to cover the risk is urgently needed. Why is it that cover is provided in other regimes which have no development risks defence, and how do our producers who export to such countries obtain adequate insurance?

Even if a need for a development risks defence was clearly made out, it could not, it is suggested, justify the version of the defence which has found its way into the legislation. Development risks, as has frequently been asserted above, truly concern dangers which were not known and which could not have been known. This plainly was the sense of the directive. The wording chosen will permit producers to adduce evidence of the state of the art as regards industry custom and feasibility of alternative designs, even for products which have been found to be defective. As stated above, these issues are part of the question of defectiveness and ought not to admitted in defence to a finding of defectiveness. The formula of what producers of

products of the same description as the product in question might be expected to have discovered makes it very difficult for UK courts to restrict development risks to its true scope.

The need for the defence is to be reviewed by the EC Commission in 1995. Unless the defence can be shown to have protected manufacturers against overwhelming liability, as is unlikely to be the case, then the opportunity should be taken to evict from the sphere of strict liability what is effectively a trespasser from the world of negligence. Only then will the policy aims underlying the new regime fully be realised.

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1. Consumer Protection Act 1987 s4(1)(e). The Act does not use the phrase "development risks", although that has become the accepted term. In domestic debates prior to the implementation of the Directive, the preferred term was "state of the art". Possible differences in the meanings of the two terms are discussed here.

2. Applying s4(2) of the Act, the meaning of relevant time depends upon the identity of the person proceeded against. For most purposes, the relevant time is the date when the product is put into circulation.

3. European Convention on Products Liability in Regard to Personal Injury and Death, DIR/Jur. (76)5. So far, the convention has been signed by Austria, Belgium, France and Luxembourg. Given that the scheme of strict liability from the directive has been adopted in the UK, our government has indicated that the UK will not be signing the convention.

4. Cmnd. 6831 (1977).

5. Cmnd. 7054 (1978).

6. For the Second Reading see Official Report, Fifth Series, Lords, Vol 482, col. 1003, et.seq.; see also Official Report, Fifth Series, Lords, Vol. 483, col. 819, et.seq., and col. 784 et.seq.; and House of Commons, 5 May 1987, Standing Committee D, col. 3 et.seq.

7. Implementation of the EC Directive on Product Liability - An Explanatory and Consultative Note, D.T.I., November 1985, para. 22.

8. See Article 7(e).

9. House of Commons, 5 May 1987, Standing Committee D, col. 36.

10. Financial Times, 1/9/87.

11. Article 15 (3).

12. See discussion in Miller and Lovell, Product Liability, (Butterworths 1977) at 107 et. seq.

13. [1905] 1 K.B. 608, C.A.

14. Ibid, at 610.

15. (1877) 2 Q.B.D. 102 at 109.

16. [1969] 2 A.C. 31.

17. Ibid, at 84.

18. [1972] A.C. 441.

19. Ibid, at 498.

20. [1971] 1 Q.B. 88.

21. The decision on the negligence aspect of the case is, at the time of writing, unreported, but the author has kindly been supplied with a transcript of Lord Davidson's judgment by the solicitor instructed by the successful first defenders.

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25. Explanatory Report para 37.

26. Ibid, para 38.

27. Cmnd. 6831 (1977).

28. Ibid, para 105.

29. Ibid, para 125 (g).

30. Cmnd. 7054 (1978).

31. Ibid, para. 1259.

32. Ibid, para. 1252.

33. Ibid, para. 1257.

34. 85/374/EEC.

35. Bulletin of the European Communities, Supplement 11/76.

36. For a discussion of the progress of the Directive, see Nilles, Defining the Limits of Liability: A Legal and Political Analysis of the European Community Products Liability Directive, 25 Va. Jnl. of Int"l Law 729 (1985).

37. Article 7(b).

38. See Taschner, European Initiatives: The European Communities, conference paper, SPTL Colloquium on Product Liability, 1984, at p12.

39. Ibid, at 12 et. seq.

40. Para 21.

41. A more verbose and arguably less clear expression than that in the Directive.

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43. Ibid, col. 787.

44. Ibid.

45. See e.g. Lord Morton of Shuna, Consumer Protection Bill, Product Liability - Where Now?, PQLE Delict course June 1987.

46. See Official Reports, Fifth Series, Lords, Vol. 483, col. 787.

47. See Morton, op. cit., n45 supra.

48. See Lord Griffiths, Developments in the Law of Product Liability, The Holdsworth Club, University of Birmingham, Presidential Address, 1987.

49. Para 22.

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53. Ibid.

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171. House of Commons, Standing Committee D, 5 May 1987.

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173. House of Commons, Standing Committee D, 5 May 1987.

174. Official Report, Fifth Series, Lords, Vol. 482, col. 1040.

175. Ibid, at col. 1057.

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183. Ibid.

184. Official Report, Fifth Series, Lords, Vol. 483, col. 821.

185. Official Report, Fifht Series, Lords, Vol. 482, col. 1049.

186. Official Report, Fifth Series, Lords, Vol. 482, col. 820 and 830.

187. Ibid, at col. 845.

188. Official Report, Fifth Series, Lords, Vol. 482, col. 1036.

189. Official Report, Fifth Series, Lords, Vol. 483, col. 838.

190. Implementation of E.C. Directive on Product Liability - An Explanatory and Consultative Note, D.T.I., Nov. 1985, para. 7.

191. House of Commons, Standing Committee D, 5 May 1987, col. 30.

CHAPTER 8

OTHER DEFENCES; PRESCRIPTION AND LIMITATION

Two remaining matters require discussion in order to complete this examination of the main aspects of product liability law. In addition to the development risks defence, the Consumer Protection Act 1987 permits a number of other defences, including that of contributory negligence; also, the Act introduces a new scheme of prescription and limitation of liability. These matters are examined in this chapter. Following the familiar structure, the principles of United States product liability law in both of these areas will be considered, again with a view to drawing lessons from that experience.

The major task regarding defences is to analyse the use of contributory negligence in the context of strict liability for product defects, a defence which will often be invoked where a defective product has been misused.[1] Before discussing this matter, the other defences provided in the Act will be considered. It goes without saying that this discussion is of defences

arising when a product has been found to be defective. It will be recalled that certain criteria have to be established before a product is found to be defective[2]. For example, the pursuer may have to argue that no adequate warning was given, or that the use to which the product was put was a reasonably expected use, or that the product was defective even when judged by the standards prevailing at the time when it was put into circulation. Evidence led by manufacturers in rebuttal of a pursuer's claims on such points does not constitute a defence to a finding of defectiveness; rather, it relates to the question of defect in the first place. The present discussion does not embrace these issues since they have already been canvassed in earlier chapters.[3]

Defences under the 1987 Act.

Section 4 provides a list of defences which can be used by 'person proceeded against' in response to a claim under the Act. Of course, as the Act makes clear, the burden of establishing these defences lies with the defender. These defences will now be examined in turn, with the exception of the development risks defence made available by s4(1)(e), which has already been discussed.

1. Section 4(1)(a)

"that the defect is attributable to compliance with any requirement imposed by or under any enactment or with any Community obligation;"

Little need be said about this defence. The language of the provision makes it plain that only compliance with an enactment will suffice: compliance with a voluntary code of practice or relevant British standard[4] is therefore not enough. Presumably the term enactment means statutory provisions or delegated legislation of the U.K. Parliament, so that, for example, a manufacturer whose products are defective in order to comply with a German regulation cannot invoke the defence in repect of products distributed in the U.K.

It must also be stressed that simple compliance with, for example, statutory safety regulations does not preclude a finding of defect. As the sub-section makes clear, the defect must be 'attributable' to compliance with the enactment or Community obligation: in other words, the product had to be defective in order to comply with the provision in question.

In its Explanatory and Consultative note, the government expressed the following view as to the meaning of the provision:

"It should be stressed that mere compliance with a regulation will not necessarily discharge a

producer from liability; he would have to show that the defect was the inevitable result of compliance, i.e. that it was impossible for the product to have been produced in accordance with the regulations without causing the product to be defective."[5]

This is a very unlikely eventuality and accordingly the defence is of minimal value to many potential defenders. As is absolutely plain, most enactments regarding products are designed specifically to impose greater safety standards, rather than to result in the production of dangerous goods. It is hoped that there do not exist many enactments which require the production of defective products.[6] However, there certainly will be instances where the defence will be invoked. For example, safety footwear regulations in a particular member state may specify that the soles be made from a particular material so as to make them non-slip; if this material is non-insulating, it would arguably render the footwear defective for other purposes, such as use in electrical work.

2. Section 4(1)(b).

"that the person proceeded against did not at any time supply the product to another;

This provision implements another defence given in the

directive - that the person proceeded against did not put the product into circulation. The major difference between the Act and the Directive on this matter is that 'supply' is used in place of the phrase, 'put into circulation'.[7] The reason given for the terminology used is that 'supply' is the more precise term.[8] 'Supply' is defined in section 46, to include a wide range of activities, including in particular:

> "(a) selling, hiring out or lending the goods;
>
> (b) entering into a hire-purchase agreement to furnish the goods;
>
> (c) the performance of any contract for work and materials to furnish the goods;
>
> (d) providing the goods in exchange for any consideration (including trading stamps) other than money;
>
> (e) providing the goods in or in connection with the performance of any statutory function; or
>
> (f) giving the goods as a prize or otherwise making a gift of the goods;"

A number of product related claims will be capable of being met with this defence. For example, where a factory produces a toxic waste which is then dumped or emitted into the atmosphere, there will have been no supply within the definition in the Act. Claims in respect of loss caused by such a product will be brought under the pre-existing law, usually in

delict.[9] Where an employee suffers injury while, for example, handling a defective product being produced by his employer, the defence in s4(1)(b) will often allow the employer to avoid liability since no supply has occurred. However, it is possible that while engaged in the production of the main product an employee is injured by a defective component part, which had been supplied to the producer of the main product by another. Here the component would have been supplied for the purposes of liability under the Act, and an action would lie against the producer of the component. It ought to be recalled that many cases of product-related injury in the workplace will be brought under the Employer's Liability (Defective Equipment) Act 1969[10], which facilitates an action against the employer in respect of defective equipment used at work. But where the product is not within the definition of 'equipment' in the 1969 Act recourse is likely, in appropriate cases, such as injury caused by a component, to the Consumer Protection Act 1987.

According to the government in its explanatory report, the defence will also exempt from the scheme of liability medicinal materials used in trials before marketing.[11] The correctness of this view is based on the assumption, which seems justified (unless the producer of the medicinal product is taken to have gifted the product), that there has been no supply within the definition of that term in s46.

Finally, the defence would also apply where for example the wrong producer is sued, and also where goods have been stolen[12] from the producer before being put into circulation, for here again there is no supply of the goods in terms of s46.

However, the wording in the act is not free of difficulty. For example, it has been suggested that goods which are transferred subject to a Romalpa clause would not be regarded as having been sold, although a court may take the view that they have been loaned so as to bring the transfer within the meaning of supply in s46.[13]

3. Section 4(1)(c)

> "that the following conditions are satisfied, that is to say-
> (i) that the only supply of the product to another by the person proceeded against was otherwise than in the course of a business of that person's; and
> (ii) that section 2(2) above does not apply to that person, or applies to him by virtue only of things done otherwise than with a view to profit;"

This sub-section implements Article 7(e) of the Directive, which affords as a defence to the producer:

> "that the product was neither manufactured by him

for sale or any form of distribution for economic purposes nor manufactured or distributed by him in the course of his business."

Accordingly, the provision in the Act requires both elements to be satisfied: it only exempts products which were supplied other than in the course of a business and, where the supplier is the producer, own-brander or importer into the EEC, supplied other than with a view to profit. Thus, a person who sells his lawnmower to his neighbour can use this defence to avoid potential liability under the Act as a supplier, since the goods were supplied other than in the course and he is not the producer, own brander or importer. Similarly, if he gives (rather than sells) his neighbour a bottle of home made wine, which proves to be defective, liability under the Act can be avoided.

4. Section 4(1)(d).

"that the defect did not exist in the product at the relevant time;

This implements, in rather more concise language, the parallel provision in the Directive:

" that, having regard to the circumstances, it is probable that the defect which caused the damage did not exist at the time when the product was put

into circulation by him or that this defect came into being afterwards;"[14]

Section 4(2) defines 'relevant time'. In respect of electricity, 'relevant time' means the time at which it was generated, being a time before it was transmitted or distributed. For products other than electricity, the meaning of 'relevant time' differs according to whether or not the person proceeded against is a person to whom section 2 (2) applies - the producer, own-brander or importer into the EEC. Where he is, the relevant time is the time when he supplied the product to another. Where he is not, the relevant time is the time when the product was last supplied by a producer, an own-brander or an importer into the EEC.

The broad effect of the definition of 'relevant time' is that the producer, own-brander or importer is not liable for products which were not defective when he put them into circulation. Obviously, this provision will not allow manufacturers to evade liability for latent defects since the product is defective, even if not apparently so, at the time of supply. It is not a defence in these circumstances that the defect was not unknown: the defence only arises if the defect did not exist. Where however the product becomes defective for a reason other than the design or production process of its producer, such as the sale of foodstuff which was not defective when supplied but which became defective

through having been kept too long prior to sale, the defence will be open to the producer. So, if warnings, instructions, safety features on containers or packaging and the like, are removed by a third party protection from liability may be available. Likewise, mishandling, poor fitting, servicing or adjusting, may render an otherwise safe product defective. In all of these cases, the Act effectively excludes liability where there is no causal connection between the defect and the design or production process.

When litigated, this provision is likely to raise some challenging questions. For example, it will often be very difficult for a manufacturer to establish from the remains of a defective product that it was not defective when it left his hands. In some cases, it will not be enough for the manufacturer to say that wear and tear caused the defect. While there are some products which become dangerous through ordinary use but which provided an acceptable level of safety when first supplied, there are many others which would not be expected to become unsafe after a period of ordinary use. Take, for example, the hypothetical producers of two types of electric cable for use on domestic appliances. The first cable cracks and eventually exposes live wires after say nine years of ordinary use. It is arguable that here the product was not defective when supplied. Assume that the second cable cracks after one year of ordinary use, perhaps because

less expensive insulating material was used: it must of course be open to a court to find that the second cable was defective and to deny the defence in section 4(1)(d).

A further difficulty with the definition of 'relevant time' arises from its application where the person proceeded against is not the producer, own-brander or importer. Here, the relevant time is the time when the product was last supplied by the producer, own brander or importer. This would appear to have the rather unfortunate consequence that, where the product becomes defective because of some act by the retail supplier, for example, removal of a warning,[15] no liability will attach under the Act. The producer, own-brander or importer will not be liable since the product was not defective when supplied by him, and for exactly the same reason the retail supplier will be able to use the defence under s4(1)(d). So, if a retailer keeps, say, a tin of prawns until they decay and become dangerous and then sells the tin, a customer injured thereby has no claim against the retailer under the 1987 Act. Of course, if it is the buyer of the product from the retailer who suffers the loss, a fairly straightforward claim under s14 of the Sale of Goods Act 1979 will lie. Even where a non-purchaser is the victim, the retailer's conduct ought to be quite readily actionable in delict.

It seems bizarre to permit a defence for the retailer where his own conduct clearly is culpable. However, the policy justification for the defence may be that the pre-existing protections noted above are adequate and that the purpose of the 1987 Act is to make the retailer liable only for products which were defective when they left the hands of the producer, own-brander or importer. In this way, the liability of the retailer is subsidiary to that of the others. Also, to use some other 'relevant time' for the retailer - such as the time of supply by him - could involve the retailer in liability for defects which are wholly outwith his control but which happen to arise after supply by the producer, own-brander or importer.

5. Section 4(1)(f)

> "that the defect -
> (i) constituted a defect in a product ('the subsequent product') in which the product in question had been comprised; and
> (ii) was wholly attributable to the design of the subsequent product or to compliance by the producer of the product in question with instructions given by the producer of the subsequent product."

Section 4(1)(f) provides an important defence for the producers of components. A producer of a component or raw material will avoid liability if he can prove that

the defect in his product constituted a defect in the main product, which was 'wholly attributable' to the design of the main product or to compliance with its producer's instructions. This defence is expressed in rather more precise terms than in Article 7(f) of the Directive, which states that it is a defence:

> "In the case of a manufacturer of a component, that the defect is attributable to the design of the product in which the component has been fitted or to the instructions given by the manufacturer of the product."

In its Explanatory and Consultative Note, the government explains the defence as follows:

> "In other words, suppliers of components made to the specification of the manufacturer of the final product will not be liable if the defect in the component was the inevitable result of compliance with the specification or of the design of the final product over which the component supplier has no control (though the final product manufacturer would be liable in these circumstances)."[16]

The broad import of the provision is quite clear: that, where a component is made to the order of a manufacturer of the finished product, and it is then used by him for a purpose for which it was not

designed, the component producer is not liable. However, there are two differences between the Directive provision and that in the Act: firstly, the Directive speaks only of components while the Act uses the term products, which will, of course, cover such things as raw materials; secondly, the Act speaks of 'the producer of the product so comprised' complying with instructions given by the finished product producer, but these words are not used in the Directive. Thus, it could be argued that the Directive embraces instructions given by the finished product producer generally, including instructions to the consumer, while the Act covers only instructions given to the producer of the product comprised within the main product. It might be suggested that the Act is more restrictive than the Directive in that it affords no defence to the producer of a component, where instructions given as to the use of the main product result in the component being misused and thus failing. [17] However, it is possible that in these circumstances a court would not find the component to be defective in terms of s2 of the Act and hence that recourse to the defence would be unnecessary.

There remain some other matters of concern: the defence is capable of being asserted by a component supplier to the effect that the producer's design meant that the product had to be defective, and that this was known to the component producer. Here, the component producer

could argue that he shoul be absolved from liability under the Act even where he has supplied a product which he knows to be defective. Similar problems arise where the component complies with specification. Some may argue that the Act intends that the supplier of a component to specification can avoid liability under the Act even where he knows that, if he complies with the specification, his product will result in the finished product being defective. Take, for example, the producer of fan belts for the engine of an aeroplane. If the manufacturer of the aeroplane insists upon a certain strength of belt which the component producer knows to be unsafe, is the component producer to escape liability where he supplies the belt in awareness of the use to which it is to be put? One way in which a court could deny the defence in such circumstances, and there is a strong argument that it should, is to find that here the defect is not <u>wholly attributable</u> to the design or to compliance with specifications. However, it is more likely that the courts will limit use of the defence to circumstances in which the component itself is <u>not</u> defective, but becomes defective because of its use in the subsequent product.

Nonetheless, the protection afforded by the defence is likely to be viewed as of significance by many producers of components, for it is common practice for the specification of components to be less than the

highest safety standard of the producer. However, there is a strong argument that such protection is superfluous and so that the defence is unnecessary. A component part which becomes defective only when used in the main product would, it is suggested, not itself fail the test of defect in section 3. As indicated above, what the Act may have done is to give a defence to the component producer even where his product, considered independently, does not meet legitimate expectations of safety.[18]

Volenti non fit injuria and Contributory negligence

(a) Volenti

Of the four major contributors to the debate on the move to strict liability, only the Law Commissions specifically recommended that claims based on the new strict liability should be subject to the defence of "assumption of risk".[19] It was felt that this defence was particularly appropriate to drugs with side effects:

> "It is well known that many drugs relieve pain or illness but may directly or indirectly bring on other unpleasant and sometimes damaging results. There is a risk with most drugs and it may be appropriate that the patient should be told the risk so that he knows what to expect. Sometimes he

> will be willing to take the risk, sometimes not. It would, in our opinion, be wrong to allow him to claim compensation in respect of a risk that he willingly assumed. The same comment applies to wilful misuse by the person injured of the product in question. For example, there should, in our view, be no right of compensation for the person who deliberately ignores whatever instructions or warnings are given as to the proper use of the product."[20]

It will be noticed that no explicit provision in the Act deals with volenti non fit injuria. One reason for this is that volenti is most apposite in duty of care situations, and of course, strict liability under the Act is not really a duty situation in the accepted sense. The application of the rule that no injury is done to one who consents, is generally taken to mean that the pursuer has agreed, expressly or impliedly, to exempt the defender from the duty of care which otherwise he would have owed.[21] Mere knowledge by the pursuer of the risk does not of itself amount to consent, although it can evidence consent [22] Thus, it is difficult to use the concept of volenti in order to establish agreement to the waiver of a strict liability obligation. It is more likely, however, that volenti is not required since the definition of defect and the doctrine of contributory negligence afford sufficient

protection to the defender.

Certainly, the examples quoted above from the Law Commissions can, in any event, be accomodated elsewhere in the regime of strict liability. There are instances of people assuming a known risk, such as using a drug and ignoring a warning. A recent and interesting example of this involves the drug used to treat acne, Accutane, which if taken by pregnant women can cause birth defects[23]. Despite clear warnings carried by the product:

> "Severe human birth defects are known to occur in women taking Accutane during pregnancy."

along with a recommendation of use of an effective contraceptive, many pregnant women have used the drug, and approximately 1,000 children have been affected.

Conduct of this type by the pursuer can fit into three possible categories. Firstly, the defence of contributory negligence may be available (see below), that defence being capable of partial or full exclusion of liability[24]. Secondly, the new rules continue to insist upon proof of a causal link between defect and harm [25]; where the harm is not caused by the defect in the product but by the actions of the user, then no causal link will be established, because of the novus actus interveniens, and the harm will not therefore be

actionable. Thirdly, the assumption of a risk will commonly preclude a finding that the product was defective and hence will be pertinent to the matter of defect rather than to a defence to a finding of defect. For example, misuse of a product or the ignoring of warnings or instructions[26], as in the example above, will often result in no finding of defectiveness upon which to found a claim under the Act. Where a drug has a known side effect, but the beneficial properties of the drug are held to outweigh the risks of the harmful effects - where, in other words, benefits exceed costs - the product ought to be found not to be defective [27]. Conversely, where a product carries a warning as to its risks that product may still be found to be defective despite the warning[28]. Accordingly, there will be little room for a plea of volenti in most cases under the new rules.

(b) Contributory negligence

As a matter of doctrinal elegance, it could be argued that fault on the part of a user of a product should be irrelevant in a system of liability in which fault by the manufacturer apparently is irrelevant. Contributory negligence can be said to involve two concepts - causation and blameworthiness - and it is arguable that the latter has no place in a strict liability system. However, even at an early stage, those contributing to the debate on the proposals for a move to strict

liability were of the view that the defence of contributory negligence was necessary[29]. Accordingly, the 1987 Act, in section 6(4), states:

> "Where any damage is caused partly by a defect in a product and partly by the fault of the person suffering the damage, the Law Reform (Contributory Negligence) Act 1945 and section 5 of the Fatal Accidents Act 1976 (contributory negligence) shall have effect as if the defect were the fault of every person liable by virtue of this Part for the damage caused by the defect".

This provision implements Article 8(2) of the Directive;

> "The liability of the producer may be reduced or disallowed when, having regard to all the circumstances, the damage is caused both by a defect in the product and by the fault of the injured person or any other person for whom the injured person is responsible."

Contributory negligence in the context of product liability is already well documented under existing negligence rules[30] and it is likely that its main uses under the Act will be in similar situations. Thus, misuse of a defective product and use of patently dangerous products are expected to continue to provide

the chief illustrations of the defence. In many cases, product misuse will result in a finding that the product was not defective in the first place. However, it will be recalled from the discussion earlier that some forms of misuse may fit into the category of reasonably expected uses, and also that the manufacturer cannot easily avail himself of the plea that his product was so obviously dangerous that it should have not been used as it was by the pursuer. In such circumstances, the product may well be found to be defective, and the pursuer's conduct may not even be enough to raise the defence of contributory negligence.

It is unlikely that courts in the U.K. will encounter much difficulty in apportioning responsibility by comparing the fault of the pursuer with the strict liability of the defender. However, it is suggested that the blameworthiness of the pursuer ought to be of less importance than the causal weight of his conduct.

Assumption of risk, contributory negligence and comparative fault in the U.S.

It is beyond the scope of this work to present a full picture of the extent to which each of the defences afforded by the 1987 Act exists in state jurisdictions in the US. Therefore, after a brief set of introductory comments on the other defences, the discussion will be confined to the main areas of

assumption of risk, contributory negligence, and comparative fault.

The defence that the product had to be defective because of some statutory requirement, would in general be expected to succeed in US litigation. Indeed, as has been noted, some states go much further in that mere compliance with regulatory standards raises a presumption of non-defectiveness.[31] Since s402A of the Second Restatement generally requires a sale of a product[32]states which have adopted it would tend to confine strict product liability to products which have been put into circulation, and so a defence similar to s4(1)(b) would arise. However, it has long been recognised in the US that strict liability for product defects and negligence for many other harms, sit uneasily together and this has partly been reponsible for an expansionary trend in strict liability. Thus, the simple fact that the product has not yet been distributed by its producer may not be enough to preclude strict liability[33].

The third defence under the Act, which broadly restricts the new scheme of liability to those who have supplied products in the course of a business, is mirrored in s402A's requirement that "the seller is engaged in the business of selling such a product"[34]. But not all courts are prepared to bar legal liability from the area of domestic dealings: a court in New

Jersey has held that a couple had to pay damages of $72,000 to a woman who was hurt when a man who had been drinking in the couple's home crashed his vehicle into her car[35].

As has been noticed, American state jurisdictions are in some disarray as regards the treatment of the time issue in product liability[36]. Certainly, some courts are prepared to treat time of trial as the appropriate time at which to judge defectiveness of the product, but this is the minority approach[37]. For the majority, the approach taken is that adopted by the new U.K. regime - a product which is not defective when distributed is not actionable. However, in circumstances such as those discussed above, when the conduct of the retailer makes the product defective, (e.g. the removal of a warning notice) strict rather than negligence liability will be visited upon the retailer.

As for the component manufacturer's defence afforded by the Act, several states recognise a 'contract specifications' defence whereby a manufacturer will not be held liable for producing a product in accordance with specifications that are beyond its control[38]. Alternatively, this matter may be dealt with by the concept of misuse, resulting in a finding that the component part was not itself defective.

In relation to contributory negligence and assumption of risk, a range of approaches is discernible in state legislatures and courts. Given the myriad and developing nature of this area, the forthcoming discussion does not seek to explain all variations in the treatment of these matters in the U.S.

Historically, contributory negligence and assumption of risk each operated to bar recovery by the plaintiff[39]. On the adoption by many states of s402A's scheme of strict product liability, U.S. courts and state legislatures embarked upon a period of rapid change in their treatment of these defences. Comment n of s402A states:

> "Contributory negligence of the plaintiff is not a defence when such negligence consists merely in a failure to discover the defect in the product, or to guard against the possibility of its existence. On the other hand the form of contributory negligence which consists in voluntarily and unreasonably proceeding to encounter a known danger, and commonly passes under the name of assumption of risk, is a defence under this Section as in other cases of strict liability...."

Thus, adoption of s402A resulted in the abolition of contributory negligence as a defence to a strict product liability action[40]. This trend however, was

short lived in that many states proceeded to adopt some form of comparative fault. The doctrine of comparative fault, which in some states is the result of legislation and in others of judical decision [41], commonly operates in one of two ways. In some jurisdictions so-called 'pure' comparative fault is employed. This works in a similar fashion to our version of contributory negligence, in that negligence on the part of the plaintiff can reduce his award of damages by the percentage contribution of his fault, even where that contribution is higher than that of the defendant. Other jurisdictions use a modified comparative fault system, by which only contributory negligence which is less, or not greater than, that of the defendant, does not wholly bar recovery[42].

Although more than half of the states in the US have statutory product liability laws, only in a small minority of these measures is there specific treatment of comparative fault [43]. However, in approximately forty three states, a system of comparative fault has been adopted, with a rough split of 50/50 between adoption by legislation and adoption by judicial decision [44]. Of those which have adopted comparative fault, the majority have used a system of modified comparative fault in preference to the pure approach. Sixteen or so states use pure comparative fault, the rest split approximately into equal camps allowing fault which firstly, is 'not as great as', and secondly

'not greater than', that of the defendant to permit recovery [45]. In the jurisdictions using modified comparative fault, fault on the plaintiff's part of more than the permitted amount triggers the common law complete defence of contributory negligence [46]. The overwhelming trend in those four fifths or so of the states which use comparative fault is to apply it to strict product liability claims [47]. However, in many of these jurisdictions certain types of conduct by the plaintiff will not operate as fault on his part. For example, failure to discover the defect and similar types of 'passive negligence' have been excluded, as has been workplace injury caused by a defective product where the injured person had no real choice but to use the product [48].

Recent decisions illustrative of some of the various approaches taken by states include that of the Illinois Supreme Court in Simpson v General Motors Corp.[49] The plaintiff, on behalf of the deceased Leland Simpson who had been killed when the earth-moving vehicle which he was operating rolled over on an icy hill, argued that the vehicle was unreasonably dangerous. It was contended by the plaintiff that a roll-over protection device or structure ought to have been incorporated in the product's design [50]. The defendant company, which had designed and manufactured the vehicle, led evidence to the effect that Mr. Simpson had been aware of the

absence of protection against damage caused by the vehicle rolling over [51]. This knowledge, it was argued, ought to allow the defences of assumption of risk and contributory negligence. Finding for the plaintiff, it was held by the court at first instance that assumption of risk was a defence under the doctrine of comparative fault, but that contributory negligence was not. Five per cent of the cause of the accident was attributed to assumption of the risk by the deceased, and the rest of the cause was attributed to the manufacturer. On appeal, the defendant argued that assumption of risk ought to be a complete defence and that contributory negligence ought to operate in mitigation of recovery. The appellate court, and then the state Supreme Court, affirmed the decision at first instance. Motivated chiefly by considerations of consumer protection, the Supreme Court affirmed dicta in an earlier decision [52] to the effect that only unforeseeable misuse of the product or assumption of the risk ought to be permitted as damage reducing factors. Simple lack of due care would not mitigate the award of damages.

Arizona achieves the same result, but by legislation rather than judicial decision: contributory negligence is not a defence and assumption of risk mitigates rather than negates an award [53].

Such a view is at odds with that adopted by many other

courts, which permit reduction for the portion of the injury attributable to the fault of the consumer. A number of state courts (including those in Minnesota, Texas and Washington) take the view that assumption of risk, misuse and contributory negligence are all damage -reducing factors. Daly v General Motors Corp.[54] is often cited as an illustration of the prevailing view that the plaintiff's fault operates in reduction of recovery. Here, the widow of a man who was killed when he was thrown from his car following its collision with a guard rail, brought a strict product liability claim against the manufacturer of the car. It was argued that a door latch on the car had a design defect which had caused the door to open following collision. Evidence that the driver had failed to exercise due care for his own safety, including allegations that he had been drinking and had failed to use safety devices [55] was led to establish contributory negligence. Holding that the conduct of the user could operate to reduce the recoverable amount of damages, the California Supreme Court took the view that its decision did not undermine the purpose of strict liability, since the plaintiff's recovery

> " is restricted only to the extent that his own lack of reasonable care contributed to his injury"[56].

Of course the difference between those jurisdictions

which allow contributory negligence and those which require assumption of risk or misuse can be quite significant given the restrictive definition of assumption of risk which is generally adopted. In order to avail himself of this latter defence the defendant must show that the consumer was aware of the defective nature of the product, that he understood and appreciated its unreasonably dangerous condition, and that he disregarded the danger and proceeded voluntarily to use the product [57]. In a number of cases which have permitted use of contributory negligence the conduct of the user which resulted in the reduction of recovery would not satisfy the stricter assumption of risk criteria.

Duncan v Cessna Aircraft Co.,[58] a decision of the Supreme Court of Texas, illustrates a balanced approach, in which a plaintiff's negligence which is less than assumption of risk but which goes further than mere failure to discover a defect operates in mitigation of the award. Given that the fault or conduct of the defendant was not at issue in a strict liability suit, the court styled its approach as based upon "comparative causation" and reasoned that this would

> "allow comparison of plaintiff's conduct, whether it is characterised as assumption of risk, misuse, or failure to mitigate or avoid damages, with the

conduct or product of a defendant, whether the suit ...[involves] theories of strict products liability, breach of warranty, or negligence" [59].

Misuse or alteration of a product, which result in injury to the user, can conceptually be located at two places in the theoretical framework of strict product liability. Firstly, if the misuse or alteration is extreme, it will commonly be found that there was no defect in the product and hence no basis for liability [60]. Alternatively, where the product is defective, misuse or alteration can be accomodated within the comparative fault doctrine as assumption of risk or contributory negligence. There seems to be no need for a separate category of misuse in jurisdictions which adopt comparative fault to include contributory negligence since it is already accomodated by that concept. If a jurisdiction uses s402A without a comparative fault doctrine, and we have noticed that few states take this approach, misuse of the defective product will be irrelevant if it does not raise the plaintiff's conduct to assumption of risk. Of course, even under a comparative fault framework, the defendant can still lead evidence that plaintiff's conduct in misusing or altering the product was so extreme as to be the sole cause of injury and that the product itself was not defective.

Proposed federal product liability legislation seeks to

impose some order upon the disparate approaches taken by states to cases in which the injured person is at least partly the author of his own misfortune. Senate Bill 100, for example, would impose a system of 'pure' comparative fault, described as 'comparative responsibility', in which a reduction in recoverable damages is the result of a jury finding that the injured party's own fault or responsibility contributed towards his loss [61]. 'Comparative responsibility', as regards the plaintiff's conduct, is defined by section 9(b)(2) as including: misuse of a product; alteration or modification of a product in a manner not consistent with the reasonably anticipated conduct of a user; and contributory negligence or assumption of risk [62]. Such conduct by the plaintiff will not be a complete bar to recovery, unless he is 100 per cent responsible, but will go to reduction of the award. This of course cuts across the pattern of approaches in individual states, and it is clear that those states which permit assumption of risk or alteration of the product as complete defences are most significantly affected [63]. Similarly, those states which use a modified comparative fault doctrine in which fault of the user is a complete bar unless it is 'not as great as' or 'not greater than' that of the defendant, will be affected by the federal Bill's 'pure' comparative responsibility approach. In such states, the new 'comparative responsibility' notion would apply to product cases, while the state's own modified system

would apply in others [64]. Fundamentally, however, the proposed Bill is about retrenchment to a negligence based liability for design and failure to warn claims, and the above comments should be read in that context. Also, even if passed, significant obstacles remain in the path of the Bill's avowed aim of uniformity in state product liability law [65].

Some courts and commentators assert that comparative fault can have no place in a regime of strict liability, because of the doctrinal differences between negligence and strict tort. Thus, it has been said that,

> "Fault and non-fault (strict liability) are by nature inconsistent"[66].

and that,

> "Application of comparative negligence to strict liability does present one serious difficulty. This is the lack of a basis for comparison".[67]

This was the view taken by the dissenting minority in Daly v General Motors Corp. [68] (supra) who argued that conceptually, negligence ought not to be an issue in a strict liability claim, and that the intrusion of negligence would undermine the very purpose of strict product liability. The defect in the product was felt

to be of so much more significance than the conduct of the plaintiff as to remove the latter from the scope of the enquiry.

Against this 'doctrinal elegance' view, it was argued that strict product liability has no sacrosanct theoretical basis, and that considerations of fairness and equity justified a reduction in the award [69]. This view recognises that negligence concepts often intrude into ostensibly strict product liability. When one considers the risk-spreading rationale behind strict liability[70] under which the risk of harm is borne by all consumers of the manufacturer's product, it is unfair to expect those very consumers to pay, in the cost of the product, for harms which are the fault of the injured user and not caused by the defective product. The American experience, disparate though it is, shows that notions of fault on the part of the user can be accomodated within a regime of strict product liability, and that no violence is done thereby to the fluency of the conceptual structure. Again, what this shows is the difficulty in wholly excluding concepts such as fault or responsibility from a strict liability regime. Arguably, the prime policy aim - accident prevention - will best be achieved by imposing upon a manufacturer liability for harm caused by his products. When the cause of harm is the plaintiff's own conduct, no apparent conceptual difficulty can overcome the fundamental fairness of permitting a reduction for

comparative fault. It is suggested therefore, that the approach in cases such as Duncan, above, and indeed its stress on causation rather than blameworthiness, makes contributory negligence more acceptable in a strict liability regime. The proposed federal statute also strikes a workable balance, if used as part of a strict liability regime. However, it must be recognised that the need to prove fault on the part of the plaintiff will necessarily increase the complexity and hence the time of the trial process.

Prescription and limitation

In implementation of Articles 10 and 11 of the Directive, section 6(6) of the Act provides that Scedule 1 of the Act shall have effect for the purpose of amending the Limitation Act 1980 and the Prescription and Limitation (Scotland) Act 1973 in their applications to actions under Part 1 of the 1987 Act. The schedule introduces the special scheme of a three year limitation of actions and a ten year 'long stop' on liability under the Act.

In England, schedule 1 inserts after s11 of the Limitation Act 1980, a new section 11A which provides that actions under Part 1 the 1987 Act,

> "shall not be brought after the expiration of the period of three years from whichever is the later

of-

(a) the date on which the cause of action accrued; and

(b) the date of knowledge of the injured person or, in the case of loss of or damage to property, the date of knowledge of the plaintiff or (if earlier) of any person in whom his cause of action was previously vested."

References to a person's date of knowledge are references to the date on which he first had knowledge of the following facts -

"(a) such facts about the damage caused by the defect as would lead a reasonable person who had suffered such damage to consider it sufficiently serious to justify his instituting proceedings for damages against a defendant who did not dispute liability and was able to satisfy a judgement; and

(b) that the damage was wholly or partly attributable to the facts and circumstances alleged to constitute the defect; and

(c) the identity of the defendant."[71]

Knowledge of whether, as a matter of law, the product was defective, or, in the case of damage to property, knowledge on a date when the person had no right of

action, is disregarded [72].

The usual amendments to the running of the period where the injured person dies before the expiry of the triennium, extension of the limitation period in case of disability, postponement of limitation period in case of fraud, concealment or mistake, and discretionary exclusion of the time limit, apply to actions under Part 1 of the 1987 Act [73].

These provisions in the Act are non-controversial, and the new scheme of limitation fits quite neatly with the pre-existing regime. The new section 11A also provides that actions under Part 1 of the 1987 Act

> "shall not be brought after the expiration of the period of ten years from the relevant time; within the meaning of section 4 of the said Act of 1987; and this sub-section shall operate to extinguish a right of action and shall do so whether or not that right of action had accrued, or time under the following provisions of this Act had begun to run, at the end of the said period of ten years."[74]

It will be recalled that the meaning of 'relevant time' differs according to whether the person proceeded against is within the class of persons covered by s2(2), that is, producer, own-brander (within the meaning in s2(2)) or importer into the EEC. Also, where

the product is electricity, 'relevant time' has a specific meaning.

The net effect of the provision is to extinguish a right of action under Part 1 ten years after the product was put into circulation.

In Scotland, the new scheme of prescription and limitation was achieved by amending, again largely by the insertion of new provisions, the Prescription and Limitation (Scotland) Act 1973. A new Part IIA is inserted into the statute, dealing firstly in s22A with the ten years' prescription of obligations. Section 22A (1) provides:

> " An obligation arising from liability under s2 of the 1987 Act (to make reparation for damage caused wholly or partly by a defect in a product) shall be extinguished if a period of ten years has expired from the relevant time, unless a relevant claim was made within that period and has not been finally disposed of, and no such obligation shall come into existence after the expiration of the said period."

'Relevant time' has the meaning given earlier, and 'relevant claim' is defined in s22A(3). The three year limitation of actions in cases other than where death has been caused by the defective product,is provided for in s22B, which declares in sub-section (2) that an

action under Part 1 of the 1987 Act

> "shall not be competent unless it is commenced within the period of three years after the earliest date on which the person seeking to bring (or a person who could at an earlier date have brought) the action was aware, or on which, in the opinion of the court, it was reasonably practicable for him in all the circumstances to become aware, of all the facts mantioned in sub-section (3) below."

Sub-section (3) lists the following:

> " (a) that there was a defect in the product;
>
> (b) that the damage was caused or partly caused by the defect;
>
> (c) that the damage was sufficiently serious to justify the pursuer (or other person referred to in sub-section (2) above) in bringing an action to which this section applies on the assumption that the defender did not dispute liability and was able to satisfy a decree;
>
> (d) that the defender was a person liable for the damage under the said section 2."

These facts are expressly stated not to include knowledge of whether particular facts or circumstances would or would not, as a matter of law, result in liability under the 1987 Act [75]. Also, in computing

the triennium, any period during which the person seeking to bring the action was under a legal disability by reason of nonage or unsoundness of mind is disregarded [76]. The new rules also give, as is also available in the general scheme of limitations under the 1973 Act, an equitable power to the court to override the limitation period in cases other than those which involve only claims for damage to property [77]. Section 22C then provides very similar rules to govern cases where death has resulted from personal injuries [78].

Accordingly, product liability actions under the 1987 Act have a separate code on prescription and limitation, which in England, where the existing rules are very similar, dovetails more neatly with the previous rules than in Scotland. In each case the pre-existing rules as to interruption of the time period for limitation remain [79].

It is an unfortunate consequence of the implementation of the Directive, which in many respects harmonises the law on product liability within Member States, that in the important area of limitation and prescription some disharmony is occasioned within domestic systems. This is of particular concern in Scotland, where the new provisions sit rather uneasily within an otherwise relatively simple and uniform set of rules. It might be contended that European harmony, as we proceed towards

the target of a truly Common Market in 1992, is of greater importance than internal uniformity. Indeed, the time limits in the product liability rules have already had a significant impact upon legal policy in England in that the Advisory Committee to the Lord Chancellor, when looking at proposals to reduce the limitation period to two or even one year, took the view that to have three years for product liability and less for other personal injury cases, would be undesirable [80]. Another argument commonly put in favour of harmonisation of time limits, and indeed harmonisation generally, is that it reduces 'forum-shopping' between jurisdictions. This point was found to be unconvincing by the Scottish Law Commission[81], which noted that the primary reason for 'forum shopping' was the differing levels of damages awarded in particular jurisdictions. In the absence of any major divergence in awards within Europe, in contrast to the disparity between awards in Europe and in the US, this particular objection lacks force.

The ten year 'cut off' period raises wider and more controversial issues. Given the relative life spans of products in general, ten years appears to be a reasonable window of exposure to potential liability. But any cut off period has an element of arbitrariness. Different types of product have many different lengths of expected non-dangerous life; there are many products which persons generally could not reasonably expect to

last for ten years, but equally there are others, such as aircraft, for which such expectations are reasonable. Also, it would appear to be anomalous that in a regime of strict product liability, that liability does not subsist for as long as the product is defective [82]. Further, the absence of a similar cut off for retailers in respect of their liabilities under the Sale of Goods Act 1979 has not proved to be overly burdensome [83]. It may also be thought iniquitous that an injured person could be barred by the cut off period even before the three year limitation period has started to run. There are certainly some product-caused injuries (for example, asbestos-related diseases, or the cancers caused by diethylstilbestrol) which do not manifest themselves for a considerable period after use of the product. As Lord Denning said in the context of the pre-existing rules on limitation:

> "No one supposes that Parliament intended to bar a man by a time-limit before he is injured at all...a man may lose his right of action before he has got it. Which is absurd."[84]

It is a further difficulty that different cut off periods can be applied within the same product, as where various components were supplied at different times, and the product itself supplied later again. Take for example, a car with a defective component part. Assume that the component was supplied just over

ten years prior to injury, and that the car was supplied just under ten years from that date. An action against the producer of the component is time-barred, but action against the car manufacturer is not [85].

Cogent arguments can be mustered on the other side of the debate [86]. Strict liability, it could be argued, ought not to rest for an indefinite period upon the producer. A cut off period would aid the minimisation of insurance costs, itself of benefit to consumers of the product in question. At the practical level, it also creates a point in time at which, for the purposes of liability under the new Act at least, the very full records, which will now require to be kept by the prudent producer, may cease to be kept. Proof of defectiveness, or indeed non-defectiveness, at a date of circulation some years gone, is difficult, and a cut off is of value in that regard.

There are, it is conceded, some good practical reasons for having a cut off period. But this part of the new regime ought not to be looked at as a discrete element: it is part of a wider scheme in which the producer already has the benefit of other rules as to time, and in particular, the producer has a development risks defence which protects him against unreasonable exposure to liability. The cut off provisions would, it is suggested, have been rather more attractive in a system of strict liability which did not permit the

defence of development risks.

Statutes of limitation and statutes of repose in US product liability law

State jurisdictions in the US have adopted a variety of measures on prescription and limitation of actions. In general, the distinction between a statute of limitation and a statute of repose [87] is equivalent to that in our system between the limitation period and the cut off period. The prevailing practice has been for state courts to apply tort statutes of limitation to product liability actions under a strict tort theory, and thus to deny to plaintiffs the use of the more advantageous warranty limitation period [88].Courts have justified this stance by asserting that despite its origins being traceable to warranty, the strict tort theory of liability is closer to negligence; there is no contract between the parties in which their will or intention is manifest [89], liability being based on social policy rather than contractual terms. This rejection of the longer warranty period has been almost universal [90].

More controversy has surrounded the matter of accrual of a cause of action. The spectrum of possible starting dates for the commencement of the limitation period includes: date of sale; date of injury; date of actual

or reasonably possible discovery by the plaintiff of his injury; date of actual or reasonably possible discovery of the causal connection between the defective product and the harm suffered; date of actual or reasonably possible discovery of the identity of the potential defendant. As an alternative to choosing one point on this spectrum as the starting date, a system could adopt a rule based on a combination of these dates, and, as has been noted, that is the path taken in the new regime in Europe ushered in by the Directive.

As a general rule, American courts adopt date of injury as the starting point [91]. Thus, in Romano v Westinghouse Elec. Co.,[92] for example, where a house was damaged by a fire caused by an explosion in a television set, the limitation period began to run from the time of the explosion [93]. Some courts even contemplate the notion that the time can run from a point earlier than the occurrence of harm: in Maly v Magnavox Co.,[94] for example, facts similar to the above case prompted the court to find that the action accrued when the harm was suffered, unless it could be established that the plaintiff knew of the defect at an earlier date [95].

Other courts have been prepared to adopt the next position in the spectrum, the clock ticking from the point in time at which the plaintiff's injury was

capable of discovery. This exception is most commonly availed in cases where injury is manifested only at a date long removed from its initial incidence. Asbestos litigation is the common example of the use of this criterion [96]. However, even in asbestosis claims, some courts have held that the period commenced when the injury was suffered [97]. Other courts reach the next point in the spectrum, holding, for example, that in a case where injury was caused by an intra-uterine device, the cause of action accrued from the point at which the plaintiff reasonably ought to have discovered that the device had been the cause of her injury [98]. Only in a small minority of states is the next point reached, delaying the running of time until discovery of the identity of the potential defendant.[99]

Thus, there is no uniformity in the approaches of the various state courts. The rather harsh 'date of injury' rule is still commonly adhered to, but there is evidence of something of a trend for courts to ameliorate the effects of this rule in cases where injury is gradual or is manifested only at a significantly later date. It can be seen that the provisions of the 1987 Act are rather more generous to the plaintiff than is the American system, since in the former the running of time does not commence until knowledge of the damage, that it was caused by the defect, and the identity of the defendant.

Statutes of repose, imposing a long stop on exposure to potential liability, had been in use in some states even prior to the adoption of a strict product liabilty, but became more fashionable following upon the analysis of product liability problems in the US by the Inter-Agency Task Force [100] . The broad aim of these statutes is,

> "to reverse perceived increases in product liability litigation and to lower products liability insurance costs."[101]

Cut off times vary, some states choosing, for example, eight years from date of sale (e.g. Oregon), others ten years (e.g. Tennessee) others twelve years (e.g.Illinois). Six years is the shortest and twelve the longest [102]. As an alternative to date of sale as the starting point some jurisdictions adopt date of manufacture [103]. As in the regime created by the EEC Directive, the running of the cut off period may not be interrupted by events, such as insanity of the plaintiff, which serve to suspend the limitation period [104]. In some states, rather than give a complete cut off, the legislation creates a rebuttable presumption that after a set period the product is non-defective [105].

Plaintiffs who perceive injustice in the working of the statute of repose have challenged statutes on the

ground of constitutionality [106]. In particular, it has been asserted that repose legislation violates the due process clause or the equal protection clause of the constitution, or that it precludes unrestricted access to courts. Such authority as there is, particularly from Florida, Illinois and Indiana, suggests a general unwillingness of courts to find violation of the constitution [107]. For example, in Pitts v Unarco Industries, Inc.,[108] the Court of Appeals for the Seventh Circuit rejected the plaintiff's arguments against the trial court's application of Indiana's ten year statute of repose to an asbestosis claim [109]. However, rejection of constitutional arguments has not been the uniform response of US courts, and in Heath v Sears, Roebuck & Co.,[110] for example, the Supreme Court of New Hampshire upheld the contention of violation of the constitution, particularly on the ground that products liability plaintiffs were unreasonably being discriminated against [111].

Policy arguments similar to those canvassed earlier have been ventilated in the US debates on the merit of repose statutes [112]. One argument has been that cut off limits are needed so as to prevent products supplied some time ago being judged by current safety standards [113]. Whatever strength this argument may possess in a US context, where product safety can be judged on a retroactive basis [114], it bears no

relevance to the U.K. regime, since it is absolutely clear that products are to be judged by safety standards prevailing at the time of supply [115].

The elimination of difficulties caused to manufacturers in maintaining and finding evidence about their products is also cited in support of repose legislation [116]. Again this argument is not wholly convincing. Records covering the repose period, commonly ten years [117] still must be kept, and presumably records for longer periods will routinely be kept in case of negligence or warranty claims. Given the ease which technology has brought to information storage, the record keeping argument founders.

Of more cogency is the costs argument. Insurance costs are cut because there is no need to speculate about long term risks. Put simply, it is argued that manufacturers can save on insurance and will also be confronted with less claims. The costs thus saved are passed on indirectly to the consumer since no rise in product prices to cover what would have been the increased costs actually takes place. It has even been argued that there is a saving for society in general since less litigation creates less pressure on the courts [118], but this is a difficult point to take seriously.

As in all of its manifestations in debates about

product liability, the significance of legal rules to insurance costs has not been the subject of sufficiently rigorous analysis. Even the major study of the American product liability insurance crisis undertaken by the Interagency Task Force drew inconclusive results as to the role of particular aspects of the law in fuelling the crisis [119]. It has been argued that insurance costs in areas other than product liability also increased during the critical period, and that this period has in any event come to an end, the insurance industry having come to terms with the liability explosion of the last two decades [120].

One piece of evidence which would be of value in assessing the merit of the insurance argument is the extent to which old products are the subject of litigation, the average awards of damages for such claims, and the relative insurance costs. The available evidence on these matters suggests that the insurance argument is not wholly persuasive. One survey states that only 2.7 per cent of the products which were the subject of product liability claims were supplied more than six years before the injury [121]. Conflicting evidence was gathered by the Interagency Task Force[122]: in a survey of appeal cases in eight state jurisdictions, covering the period 1965 - 1978, the findings were as follows - the average product was made in 1963; ten per cent of the products were produced in

1955 or before; four per cent were produced in 1950 or before; in nearly ten per cant of cases ten years or more had passed between supply of the product and the occurrence of injury;in the majority of cases, injury occurred within two years of purchase [123]. This research, drawing as it does only upon appellate decisions, and relating, in some of its findings, to date of trial rather than date of injury, is not sufficiently scientific as a basis for policy. Other, apparently more reliable [124] data shows that only 2.8 per cent of all injuries which resulted in claims, and which gave rise to 6.6 per cent of total compensation paid, were caused by products which were at least ten years old [125].

An alternative approach to the cut off problem, canvassed in versions of the proposed federal legislation [126], is to assign a useful life to particular products and then to time-bar claims in respect of injuries suffered after the expiry of the useful life. This suggestion is so fraught with practical difficulties as to render its adoption unlikely.

Conclusion

The existence of a long stop of ten years in the Consumer Protection Act 1987 is broadly in keeping with the approach of U.S. jurisdictions. A number of

practical and policy considerations support this position. However, it must be recalled that U.S. product liability law, taken together with poeculiarites of the U.S. legal system, is significantly more burdensome upon the manufacturer than the new scheme of liability in the U.K. In the absence of sufficiently convincing evidence that there will be a serious increase in costs for manufacturers or their insurers, it is difficult to counter the argument that liability should run for as long as the product is defective. Given the known latency of many product risks, it is fundamentally unjust to bar a claim on an arbitrary cut off test, perhaps before the cause of action has even accrued.

REFERENCES - Chapter 8

1. This may well result in a finding that the product was not defective: see Chapter 2 supra.

2. Ibid.

3. Chapters 2,3 and 7, supra.

4. It is to be expected, however, that not many products which comply with the relevant standard will be defective.

5. Implementation of the E.C. Directive on Product Liability - An Explanatory and Consultative Note, DTI, para. 56.

6. See Lord Griffiths, Developments in the Law of Product Liability, Holdsworth Club, Univ. of Birmingham, 1987 at 14.

7. Art. 7(a).

8. Official Report, Fifth Series, Lords, Vol. 483 col. 807.

9. In England, the rule in Rylands v Fletcher may result in the imposition of strict liability in such cases. R.H.M. Bakeries (Scotland) Ltd. v Strathclyde Regional Council 1985 S.L.T. 214 applies a culpa based standard in Scots law.

10. Discussed briefly in Chapter 2 supra.

11. Implementation of the E.C. Directive on Product Liability - An Explanatory and Consultative Note, D.T.I., Nov. 1985, para. 56(a).

12. See Explanatory Memorandum accompanying the first version of the EEC Directive at para. 14.

13. Miller, Product Liability and Safety Encyclopaedia, III at 175. (Butt. looseleaf)

14. Article 7(b).

15. See Harvey, Law of Consumer Protection and Fair Trading, 3rd. edit. (Butterworths 1987) at 151.

16. At para. 56 (d).

17. Official Report, Fifth Series, Lords, Vol. 483 col. 868.

18. See Explanatory Report to Strasbourg Convention, para. 51, reproduced in Liability for Defective Products, Cmnd. 6831 (1978)

19. Cmnd. 6831 (1977) para. 125(n).

20. Ibid, para. 106.

21. See Salmond and Heuston, Law of Torts, 19th edit. by Heuston and Buckley, at 558. (Sweet and Maxwell 1987).

22. See, for example, Smith v Charles Baker [1891] A.C. 325.

23. See report in Financial Times April 23 1988.

24. Law Reform (Contributory Negligence) Act 1945.

25. Liability is for damage "caused wholly or partly by a defect in a product": s2(1).

26. Discussed fully in Chapter 4, supra.

27. See The Law Commissions' Report, Liability for Defective Products, Cmnd. 6831 (1977) para. 57.

28. See O'Brien v Muskin Corp. 94 N.J. 169, (1983), discussed in Chapter 7, supra.

29. Contributory negligence was not specifically provided as a defence in the first (1976) version of the EEC Directive since such provision was though to be superfluous, but the final version of the Directive does specify the defence. See also, Cmnd. 6831 (1977) para. 107-110; Strasbourg Convention Art 4.

30. See Miller and Lovell, Product Liability, (Butterworths 1977) at 293-296.

31. See discussion in Chapter 2 supra.

32. See discussion in Chapter 3 supra.

33. The major area involving such litigation is that of workers using asbestos in the workplace.

34. s402A (1)(a).

35. See 'Sky High Damage Suits', U.S. News & World Report, Jan. 27, 1986, at 35.

36. See discussion in Chapter 7 supra; see also, Symposium, Product Liability - Passage of Time, 58 N.Y.U.L. Rev., (1983).

37. See Chapter 7 supra.

38. See, Note, Liability of a Manufacturer for Products Defectively Designed by the Government, 23 B.C.L. Rev. 1025 (1982). See also Rawlings v D.M. Oliver, Inc. 97 Cal. App. 3d. 890, 159 Cal. Rptr. 119, (1979).

39. See Wade, Comparative Negligence - Its Development in the United States and Its Present Status in Louisiana, 40 La. L.Rev., 299 (1980).

40. See Trine, Product Liability - Meeting the Defenses, Trial, Nov. 1985, 24. See also: McNamara, Use of Comparative Fault in Strict Products Liability: Bell v Jet Wheel Blast, Division of Ervin Industries, 31 Loy. L.Rev. 1014 (1986); Revitt, Strict Liability and Comparative Fault: What Standard Should Apply?, Ill.Bar.Jnl. Dec. 1986, 218; Garrison, Merger of Comparative Fault and Strict Products Liability in Missouri, 54 U.M.K.C. L. Rev. 243 (1986).

41. See Trine, op. cit.

42. See Phillips, The Status of Products Liability Law in the United States of America, Conference Paper presented to SPTL Colloquium, Sept. 1984., at 10.

43. See Cronan, Proposed Federal Product Liability Act, 29 Trial Lawyers Guide, 498, at 500 et. seq. (1986).

44. Twerski, A Moderate and Restrained Federal Product Liability Bill: Targeting the Crisis Areas for Resolution, 18 Univ. of Mich. J. of L.Ref., 575, (1985), at 622.

45. Ibid, at 623.

46. Ibid, at 623-4.

47. Phillips, op. cit., at 10.

48. See Trine, op. cit., at 26.

49. 108 Ill. 2d. 146, 483 N.E. 2d 1 (1985).

50. 108 Ill. 2d. at 148.

51. Ibid.

52. Williams v Brown Manuf. Co. 45 Ill.2d. 418, 261 N.E. 2d. 305 (1970).

53. Ariz. Rev. Stats. Ann. para. 12-2501.

54. 20 Cal. 3d. 725, 575 P.2d 1162 (1978).

55. See Levitt, op. cit. at 219.

56. 20 Cal. 3d 725, at 737.

57. See Williams v Brown Manuf. Co. n52 supra.

58. 665 S.W. 2d. 414 (Tex. 1984).

59. Ibid, at 428.

60. See discussion in Chapter 2 supra.

61. See Cronan, op. cit., at 499.

62. Ibid.

63. Ibid, at 500-1.

64. See Twerski, op. cit., at 622 et. seq.

65. Phillips, op. cit. at 15.

66. Fischer, Products Liability - Applicability of Comparative Negligence, 43 Mo. L.Rev. 431 (1978) at 433.

67. Levine, Strict Products Liability and Comparative Negligence: The Collision of Fault and No-Fault, 14 San Diego L.Rev. 337 (1977) at 356.

68. Note 54 supra.

69. This was the majority view in Daly supra; see 575 P.2d at 1169.

70. An important policy consideration for the court in Beshada v Johns-Manville Prods. Corp. 90 N.J. 191 (1982). See discussion in Chapter 7 supra.

71. Limitation Act 1980 s14(1A), as inserted by Sched.1 para.3, Consumer Protection Act 1987.

72. Ibid.

73. Limitation Act 1980 s32 as amended by Sched.3 para. 5, Consumer Protection Act 1987.

74. s11A(3).

75. s22B(5).

76. s22B(4).

77. s22B(6).

78. Aspects of the law on prescription and limitation as regards latent damage in Scotland are curently under review by the Scottish Law Comission; see Scottish Law Commission, Consultative Memorandum No. 74, Prescription and Limitation of Actions (Latent Damage) (1987).

79. See Art. 10 of the EEC Directive (85/374/EEC).

80. See Lord Griffiths, op. cit., n6 supra.at 16-17.

81. Cmnd. 6831 (1977) para. 147.

82. Ibid, at para. 154.

83. Ibid, at para. 155.

84. Watson v Fram Reinforced Concrete Co. (Scotland) Ltd. and Winget Ltd. 1960 S.C.(H.L.) 92 at 115.

85. The car manufacturer's claim against the producer of the component for contribution or indemnity is of course unaffected by the 1987 Act.

86. See discussion in the Law Commissions' Report, Cmnd. 6831 (1977), at paras. 151-160.

87. There is a wide variety of Statutes of Repose and some five different uses of the term: see McGovern, The Variety, Policy and Constitutionality of Product Liability Statutes of Repose, 30 Am. U.L.Rev. 579 (1981).

88. Ibid. See also Reynolds, Statute of Limitations Problems in Products Liability cases - Exercises in Privity, Symmetry and Repose, 38 Okla. L.Rev. 667 (1985).

89. See Victorson v Bock Laundry Machine Co., 37 N.Y. 2d. 395, 335 N.E. 2d. 275 (1975).

90. See Reynolds, op. cit.

91. Ibid, at 671.

92. 336 A.2d 555 (R.I. 1975).

93. See discussion in Reynolds, op. cit. at 671.

94. 460 F.Supp.47 (N.D. Miss. 1978).

95. See Reynolds op. cit., at 677.

96. Se e.g. Clutter v Johns-Manville Sales Corp. 646 F.2d. 1151 (6th Cir. 1981).

97. Large v Bucyrus-Erie Co., 524 F.Supp. 285 (E.D. Va. 1981).

98. Ballew v A. H. Robins Co., 688 F.2d. 1325 (11th Cir. 1982), discussed in Reynolds, op. cit., at 673.

99. Ibid.

100. 3 Interagency Task Force on Product Liability, U.S. Dept. of Commerce, Final Report of the Legal Study 1-36 (1977).

101. See Rosen, 1984 Annual Survey of American Law, Products Liability-State of the Art Defense and Statutes of Repose, (Dec. 1985), 825.

102. See Schwartz, New Products, Old Products, Evolving Law, Retroactive Law, 58 N.Y.U.L. Rev. 796 (1983) at 843.

103. Rosen, op. cit., at 834.

104. See e.g. DeLay v Marathon LeTourneau Sales & Serv. Co., 48 Or. App. 811, 618 P.2d. 11 (1980).

105. See Schwartz, op. cit., at 848.

106. See Rosen, op. cit., at 836.

107. See Reynolds, op. cit., at 692-3.

108. 712 F.2d. 276 (7th Cir. 1983).

109. See also, Scalf v Berkel, Inc., 448 N.E. 2d. 1201 (1983).

110. 123 N.H. 512, 464 A. 2d. 288 (1983).

111. See discussion in Rosen, op. cit., at 836 et. seq.

112. Ibid, at 834-5.

113. Ibid. See also, McGovern, op. cit., at 589.

114. See Schwartz, op. cit.

115. See discussion in chapter 2, supra.

116. See Rosen, op. cit., at 834.

117. This is the period applicable in Europe under the Directive and is a common length for U.S. statutes of repose: see Schwartz, op. cit., at 842-3.

118. See McGovern, op. cit., at 594.

119. See Report, n100 supra.

120. Rosen, op. cit., at 835.

121. Massery, Date-of-Sale Statutes of Limitation - A New Immunity for Product Suppliers, 1977 Ins. L.J. 535.

122. Report, n100 supra, at 75.

123. See discussion in Schwartz, op. cit., at 813 et.seq.

124. Ibid, at 813.

125. See Martin, A Statute of Repose for Product Liability Claims, 50 Fordham L.Rev. 745 (1982), referred to by Schwartz, op.cit., at 847.

126. See Reynolds, op. cit., at 695.

CONCLUSION

Cogent policy reasons justified the introduction of a scheme of strict liability for product defects. However, the regime contained in Part 1 of the Consumer Protection Act 1987 falls some way short of providing a true system of strict liability. The new rules carry so much uncertainty and in important respects bear so many similarities to the law of negligence that serious doubt can be cast upon the usefulness of the legislation.

It was always clear that the introduction of a statutory scheme covering a major area such as product liability would necessarily involve the exclusion of certain persons from the scope of reparation. The drawing of the required boundaries is done by a new set of concepts, in particular, 'defect', 'product', 'damage' and the development risks defence. Each of these concepts carries with it uncertainties and ambiguities which are capable of being resolved only after litigation. Perhaps the least clear of these concepts is the elusive notion of 'defect'. The Act gives no readily ascertainable objective standard against which products can be measured. A major policy aim of the reformers was the encouragement of higher safety standards, but a manufacturer must have a clear understanding of the type of deficiency which could

expose him to litigation. The lack of clarity evident in the Act's definition will minimise its hortatory function.

Replacing the doctrine of reasonable care with a criterion which focuses upon the product introduces so many variables into the enquiry that the ability of courts rationally to adjudicate upon product design can be called into question. Seeking refuge from the ad-hoc nature of a simple consumer expectation test, many American courts, urged on by academic commentators, have devised often quite complex risk-benefit indicators - so called 'decisional models'. It is not to be expected that courts in the U.K. will follow this example. However, some flesh requires to be put on to the rather bare criterion in the Act, at least in order that legal advisers can advise their clients with some degree of certainty. Some form of risk-benefit model may achieve this aim.

As far as the concept of 'product' and the chain of liability is concerned, the scheme in the Act strikes a fair balance. The economic efficiencies which could have been achieved by a pure form of channelling of liability have rightly been sacrificed in order to afford proper protection to injured persons. Again however, the new concept creates some shadows of ambiguity, for example as regards the treatment of information products.

Important questions will also arise in regard to the use of warnings and instructions attached to products. The Act is likely to create an increase in the use of such information, but it is doubtful whether the criteria for strict liability in warnings cases has advanced much beyond that of the law of negligence. If in 1995 the development risks defence is removed from the regime of liability then courts in the U.K. may be faced with the apparent illogicality of finding that a manufacturer is liable in respect of an undiscoverable defect which he therefore could not have warned against.

The Act is quite definite on the matter of recoverable loss, although as the general American experience demonstrates there is significant room for improvement upon the rather unsubtle approach typified by decisions such as the East River [1] case. The prospect of widespread recovery of damages for pure economic loss has receded from the horizon of potential developments in the common law of negligence, and in commercial cases, this can be justified. However, as has been argued, there is again room for development in the context of pure economic loss suffered by consumers.

In general the defences available under the Act are reasonable, with some minor difficulties of interpretation, and with the exception of development risks.

These criticisms would perhaps have been rather insubstantial on their own and the uncertainties inherent in the new scheme may have been tolerable in a properly constructed regime of strict liability. The new rules, while in places opaque and requiring of judicial interpretation, would have comprised a worthwhile step forward for the law. These new concepts should eventually, in some cases after litigation, provide more certainty than the open textured language of the common law. With certainty will come shorter judgments, speedier justice and less expensive litigation. However, at least in the early life of the new rules these objectives will be frustrated since it is to be expected that many pursuers will proceed as in the U.S. on alternative negligence and strict liability grounds. The real problem is that the new scheme is imbalanced because of the inclusion of a development risks defence.

There remains some underlying uncertainty about just how marginal or otherwise the changes wrought in the law of reparation by the shift to the new regime will prove to be. For defects caused by the manufacturing process there will, admittedly, be no real change - such defects would trigger liability under negligence as well as under the new rules. Simlarly, for defects which could not feasibly have been discovered the development risks defence returns us to a position close to that in the law of negligence. However, there

remains the key area of design defects, and it may be here that the major impact of the changes brought about by the Act will be felt. The new rules will provide the courts with more opportunities to stigmatise a design as defective than under the law of negligence.

There is much wrong with the U.K. system of compensating those who suffer loss. If one area of delict or tort is to be hived-off and reformed, such as has taken place with product liability, then the reforms must, to be justifiable, have real significance. So many inadequacies remain in the legislation and in the common law that the voices of those seeking a more radical approach to compensation will not, even in the field of product liability, be stifled.

As originally mooted, with no development risks defence, the scheme of strict liability represented a balanced whole, albeit with some inherent uncertainties. That balance has been upset by the inclusion of a development risks defence, which goes even further than permitted by the Directive. The inclusion of this defence simply makes the step forward achieved by the Act so minimal as to be of doubtful worth. Arguably, an equally effective and much less problematic shift in favour of the victims of defective products could have been achieved by reversing the burden of proof so that the producer would have to

establish that he had taken reasonable care[2].

There is, however, a redeeming feature in the Directive - that the presence of the development risks defence is to be reviewed in 1995. Current indications are that this review will be based upon decided cases in Member States, but it would be of great value for the Commission to have a full empirical study of the use of the defence, including its use in preventing claims from being pursued, or in affecting the settlement of claims. In particular, a thorough investigation of the capabilities of the insurance industry is required. In the present writer's view, it is only if this review results in removal of the defence that the new legislation will have been worthwhile. Even then, however, as the foregoing discussion has endeavoured to show, there is significant room for improvement both in the legislation and in the common law.

Meanwhile, in the United States intensive lobbying [3] goes on in an attempt to secure the passing of federal legislation which will effectively return the liability standard to that of negligence. The U.S. system certainly has its problems, although these are not the making of the substantive law. In Europe, the 'lowest common-denominator' approach to change has triumphed. All that was needed was for one Member State to insist upon the inclusion of the development risks defence and most of the others were virtually forced to adopt a

similar position lest manufacturing interests in their own countries be placed at a disadvantage. In this way, the well-balanced proposals of the major contributors to the debate on reform of the law were seriously diluted, and legal historians may come to judge that when faced with the challenges posed by the Thalidomide tragedy, the eye of the law scarcely flickered.

CONCLUSION - References

1. East River Steamship Corp. v Transamerica Delaval, Inc. 106 S.Ct. 2295 (1986). Discussed fully in Chapter 5, supra.

2. For the Law Commissions' views on this matter, see Cmnd. 6831 (1977) paras. 34-37.

3. For an interesting account of some of the claims made on behalf of the manufacturers' lobby, see Twerski, A Moderate and Restrained Federal Product Liability Bill: Targeting the Crisis areas for resolution, 18 Univ. of Mich. J. Of L. Ref. 575 (1985). For the first time in the history of Federal attempts at reform, a Uniform Product Safety Bill obtained, on June 14 1988, the approval of the House of Representatives' Energy and Commerce Committee: Financial Times 25/8/88. However, there is still along way to go before such legislation is passed, and there is no pressing reason to suggest that this attempt will do better than the various others which in recent years have foundered.

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