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Folder Title:
Tort Reform [2]

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TORT REFORM BY CONTRACT

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copied to
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Thanks to Christopher DeMuth for suggesting this monograph. Also to Clark Havinghurst for a helpful discussion of the state of the law.

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INTRODUCTION

Accidents can occur in two classes of situations. In one type, the injurer and the victim are "strangers" in that they have no prior relationship with each other. An example is the typical automobile accident.

In the second, the two parties have some relationship before the injury takes place. A patient purchases services from a physician before malpractice can occur; a consumer buys a product before any harm leading to a product liability suit can arise; a worker accepts a job with an employer before being injured.

The legal system could treat these two classes of accidents differently, and historically has done so. Historically, the first class of accidents was the province of tort law, the law governing accidents between strangers. The second was more nearly the province of contract law. In contract situations, the parties could specify the terms which would govern in the event of a mishap. Often these terms were specified in the warranty associated with the product or service. For example, warranties would commonly disclaim any responsibility on the part of the manufacturer for "consequential" damages -- damages arising from the failure of the product over and above the value of the product itself. (If your refrigerator breaks, the cost of the food which spoils is a "consequential" damage. Injuries associated with the use of a product are also a form of consequential damages.)

In recent years this distinction has been virtually eliminated by the court system. The courts are now unwilling to accept some

contractual limits in injury cases when there is a prior relationship between the injurer and the injured.¹ This unwillingness may apply both to standards of liability and to damage limits. That is, courts apply something approximating strict liability to product injury cases, no matter what standard the parties desire, and courts may determine damages independently of any contractual specification of payments. Indeed, since the courts appear not to accept such contractual limitations, parties seldom bother to write them. In fact, as shown later, courts might accept damage limiting contracts if parties did in fact write such contracts.

In the analysis which follows, I address the issue of contractual specification of damages or damage rules. The analysis applies equally to product liability, medical malpractice, and workplace injuries because in all three cases parties are in a position to agree on terms before the accident occurs. (I will generally refer to "products," but the reader should keep in mind that the analysis is more general.) I do not directly address the issue of liability rules.

The purpose of this work is to show that, at least with respect to damages, current policy which does not allow contractual specification is in error. Courts should allow parties to specify by contract the damages which will be allowed if an accident ensues, and parties should specify damages in contracts. The

¹For an excellent discussion of the intellectual basis for this change in policy, see Priest, 1985. For a lively discussion of its implications and of the legal doctrines involved, see Huber, 1988.

argument is based on showing that parties to contracts of the sort at issue here would prefer limits on damages.

This may be obvious for potential injurers: They would obviously prefer smaller damage payments if they are sued and lose. However, potential victims would also prefer to contract for smaller damage payments before an accident occurs. This is because, since injurers and victims are in a contractual relationship with each other, victims must pay for any expected damages payments. They pay in the form of higher prices for products or services, or through lower wages. The market will lead to increased prices to compensate for any expected damage payments.

There are several proposals for "tort reform" in the literature and in policy discussions. One point of this analysis will be to present yet another proposal. However, the proposal here is based in contract, with little if any need for statutory change. Chapter 1 will discuss the advantage of contractual tort reform. On the other hand, some economists argue that the decision by the courts to ignore contracts has been correct; these arguments are discussed and criticized in Chapter 2.

Since damages ultimately go to victims who are consumers, it might appear that consumers would be indifferent between paying high prices and receiving high damage payments and paying low prices and receiving low payments. However, this is not the case. Rather, one important point made here is that consumers would prefer not to pay for higher damage payments if they had that option. The value of these payments to injured consumers is less

than their cost to purchasers, even if the costs are the mathematically fair expected values of the payments. The argument showing this is complex; it is presented in Chapter 3.

Damages perform two functions: they reimburse injured consumers and they provide incentives for potential injurers to take proper care to avoid injury. Most economists believe that the second function is more important than the first. Many argue that large damage payments are needed to provide proper incentives for potential injurers to take care. This argument is based on an assumption that the only mechanism for safety is the tort system, a flawed assumption. This point is discussed in Chapter 4 where alternative mechanisms for safety, including regulation and also reputation, are discussed.

If the courts do allow parties to contracts to limit damage payments, this will have important policy implications. This is because large damage payments have harmful effects on consumers and on the economy. Chapter 5 discusses some current proposals for increasing damage payments (beyond even their current level) and shows in general the harm generated by large payments, both existing and potential. It shows the benefits which will accrue if courts allow contractual limits for damage payments, if I am correct in arguing that parties would usually choose to limit such payments if they were allowed to.

One benefit of contractual tort reform is that parties may be able to accomplish this reform on their own, independently of the court system. While this is not certain, there is some evidence

that courts are beginning to allow such limits on damages. Chapter 6 discusses this evidence and provides some suggestions for drafting contracts which are more likely to be accepted by the courts.

CHAPTER 1: CONTRACTUAL REMEDIES TO TORT PROBLEMS

Readers will need no convincing that many authorities believe that current tort and products liability law in the U.S. has been misguided. Many of those who believe this have made suggestions for reform. I also provide suggestions for reform. I first indicate the nature of the reform which I am proposing, and briefly explain its advantages. Basically, my proposal is for greater reliance on contract for specifying damages. I also discuss a few alternative proposals for tort reform, and indicate why I believe my proposal is preferable.

A SIMPLE PROPOSAL: CONTRACTUAL SPECIFICATION OF DAMAGES

The change in liability law recommended here is simple. In situations where there is a prior relationship between injurers and victims (product liability, workplace injury, medical malpractice), the parties should be allowed to specify by contract or warranty the types of damages for which injurers will be liable.

Note that this is not a full blown return to contract for product liability harms (even though such a return might be desirable.) Rather, it is a return to contract only with respect to one part of the liability equation, albeit an important part. Nonetheless, many aspects of tort law over which parties might like to reach private agreements (strict liability versus negligence, standards of care, privity of contract, etc.) are omitted from the analysis.

My proposal is not unique, in that many others have advocated a return to contract, at least for medical malpractice. Epstein

(1986) and elsewhere, and Havinghurst (1986) have been strong advocates for return to contract. Havinghurst indicates that parties might adopt many of the limitations which I also suggest they might prefer, as does Coleman (1989). Schwartz (1988) also advocates a return to contract principles, although his proposal is much more complex. Cooter and Sugarman (1988) advocate a market in "unmatured tort claims" and indicate that this market would operate essentially by reducing the costs of products.

Economic theory indicates that if contracting over damages were allowed, then parties might limit the amount of damages that would be allowed. Chapter 3 discusses in detail the theory. There, I explain why parties would likely choose to limit damages, and show which damages parties would probably include. At this point, it is sufficient to indicate that such damage limitations would be likely. In particular, parties would probably allow damages for "pecuniary" losses (including medical care and some fraction of lost wages) but not for "nonpecuniary" losses (pain and suffering, emotional distress, lost pleasure of life).

BENEFITS FROM THE PROPOSAL

There are two major benefits from this limited approach. First, the approach is voluntary. Second, it will be relatively easy to implement, at least relative to alternatives in the literature.

Voluntarism One important benefit of a contractual approach is that it is voluntary. That is, both parties (potential injurer and potential victim) must agree to the limitation before it can

be put in place. As indicated above, Chapter 3 provides a sustained argument regarding the types of damages parties would likely agree to. However, the argument is largely theoretical. We do not currently observe contractual specification of damages, and so we have no data which can demonstrate the correctness of the argument. Therefore, the theory might be wrong. Parties might not desire the menu of damages which I predict they would desire.

With a contractual solution, if I am wrong, nothing is lost. The costs of any errors are self limiting. I predict that parties in a voluntary transaction would adopt certain terms, but all I propose is that we allow parties to engage in the voluntary transaction. If my predictions are incorrect, the process is self correcting. Parties will simply not adopt the terms I suggest. They may opt for even less in the way of damages than I suggest. On the other hand, they may in fact desire the current set of rules; Croley and Hanson (1991) argue that current laws are better than previous doctrines, and that consumers benefit from the current regime in tort law. I believe that their argument is mistaken on several counts², but if they are correct and I am wrong, then my approach will cost nothing, because consumers will simply not agree to the terms I suggest.

An Easy Solution A second benefit of the proposed solution is that it may be relatively easy to implement. Parties

²For one example, they argue that consumers would want compensation for nonpecuniary losses, but I show in Chapter 3 that this is incorrect. This is a key part of their argument, and, in my view, a key mistake. For a thorough critique of their arguments, see Priest, 1992.

can themselves write whatever contracts they desire. We do not need legislation to implement the policies I am proposing. Rather, they can be done with relatively minor changes in interpretation by the courts. Indeed, since no contracts have been written in the form I am suggesting, it may be that no decision by the courts is actually needed.

The courts may uphold these contracts, even if there is no statutory change. This is particularly likely because we have now (at least on the Federal bench) many judges who appear to believe in principles of contractual freedom. Much of the change in antitrust law in recent years (which has been moving towards relatively more efficient outcomes) has been driven by judicial rulings, rather than by statute, as discussed in Kovacic, 1991. The same mechanism may be useful for tort reform as well.

The argument advanced here may make it more likely that the courts will accept agreed upon damages. I present arguments based on rational individual behavior in favor of certain damage principles. If the parties contract for this level of damages, attorneys for defendants in the event of an accident followed by litigation may be able to present convincing arguments as to why parties would have agreed to this level of damages. This will provide an alternative to a theory of "unequal bargaining power" to explain the form of the agreement.

Moreover, there are reasons for believing that the courts might accept this solution. I do not advocate complete elimination of damages. Rather, the damages to which parties are likely to

contract are losses of earnings and medical payments. This measure of damages is roughly equivalent to payments in workmen's compensation cases. Therefore, an argument against finding such contracts "unconscionable" is that this measure of damages has been mandated by statute for a wide class of accidents, and therefore is not in any sense against public interest.

I suggest that parties would contract for compensation for actual monetary losses, including medical expenses and lost earnings. If so, then injured parties would not be likely to become public charges, and society would not be forced to pay for their treatment or support. Therefore, there would be no argument that the contracts would lead to increased welfare spending or other public costs. There would be no argument that the poor or others lacking in medical insurance would be disadvantaged. Courts could not use this argument to invalidate the contracts.

Chapter 6 discusses in detail the legal arguments regarding the likely acceptance of such contracts by the courts, and the contractual form which would make such acceptance more likely. Even if the courts will not uphold contractual limitations of damages, the statutory change needed to obtain this limit may be relatively small. Many states have already passed laws "capping" damages for various types of torts. The proposal here is less interventionist than a cap. Rather than limiting damages to a fixed amount, damages can be whatever level the parties agree to before the accident. It would be odd (but unfortunately not impossible) if state legislatures were themselves willing to

specify damages for injured consumers, but not be willing to allow consumers to choose their own level of desired damages.

ALTERNATIVES

The voluntary nature of my proposal and the ease with which it might be adopted stand in contrast to other proposals in the literature which are more complex and which would probably require statutory implementation. To show that this is so, I briefly discuss some typical proposals for reform.

Alan Schwartz (1988) presents a well thought out, well argued and well crafted set of reforms, based on a careful analysis of consumer preferences. Much of the analysis agrees with my proposals; for example, Schwartz argues strongly that it is undesirable for compensation for nonpecuniary losses, for much the same reasons that I discuss. If legal change were costless, then Schwartz' proposals might be desirable, but these proposals would be much more difficult to implement, and therefore are much less likely to be implemented, than my suggestions. Schwartz' proposals are for "default" rules, rules which govern unless the parties specify different rule contractually. In allowing freedom of contract, his suggestions are identical to mine. However, I would not go so far in specifying a default rule.

Schwartz would reform the liability standard. He suggests a rule of strict liability, but with a complete defense of contributory negligence or of assumption of risk. Warnings should be a stronger defense against liability than is now true.

With respect to damages: for pecuniary losses, Schwartz would

hold firms liable. However, he would allow consumers to pay a low price and purchase products with no bundled insurance, if the consumer could demonstrate that he had first party insurance. He argues that courts should not award nonpecuniary damages, but legislatures should consider a system of fines on firms, with the amounts rebated to consumers, for adequate safety incentives, and punitive damages should be limited to "outrageous" cases.

W. Kip Viscusi (1991)³ suggests complex reforms which do not rely on contract. Suggested reforms are: Use of regulatory agencies rather than tort litigation to determine if products should be manufactured at all; replacement of the current risk-utility test with a negligence standard to determine if additional safety features are justified; improvements in hazard warnings and in doctrine relating to warnings; and use of deterrence (willingness to pay) values when the goal of tort liability is deterrence.

While some of these proposals (return to a negligence standard, improvement of warning labels) are sensible, others are puzzling. Viscusi would rely more heavily on regulatory agencies to determine if products should be sold. However, he cites (p. 122) 13 studies of the effects of existing regulation. Of these studies, only one found unambiguously beneficial effects of regulation, and two others found possibly beneficial effects. The other 10 studies found either "no significant" beneficial effects or negative effects. Thus, it is not clear why Viscusi thinks that

³This discussion is based on Rubin (1992).

increased reliance on regulatory efforts would be beneficial, given the record of such efforts to date.

Similarly, Viscusi indicates that using "deterrence" values for damages (which I call "hedonic" values, and discuss in Chapter 5) would lead to a 10-fold increase in damages, but he advocates such policies in some cases. However, he presents no evidence indicating that juries would be able to determine which cases would be appropriate for such damages. Hence there is no reason not to expect this policy to simply jack up damage payments with substantial harmful effects. An analogy may be warnings: while well-designed warnings should enable manufacturers to escape liability, the courts have essentially used warning doctrine to create another possibility for finding liability. In Chapter 5, I show that excessive damage payments have detrimental effects on resource allocation through price effects.

The major puzzle about the policies Viscusi advocates is this: Products liability litigation occurs in contexts where plaintiffs (consumers) have a pre-accident contractual relationship with defendants (firms). Viscusi himself has been a leader in showing that much risk is "by choice" in contractual situations. Nowhere in this book is evidence presented indicating that product risks are excessive -- that is, that the level of risks in products is greater than the level consumers would desire if they could choose. Priest (1985) has shown that the switch from contract to tort in products liability was the result of a misconception on the part of academic lawyers, and Viscusi presents no evidence inconsistent

with this argument. Therefore, a natural question to ask is, Why not advocate a return to contract in order to control risks associated with products in potential contractual settings? Viscusi does not even allude to this reform, but his arguments and data are consistent with the approach suggested here.

The Council on Competitiveness (1991), a Federal government policy group, wrote a set of guidelines aimed at "Civil Justice Reform." Reading of the rationale for the proposals indicates that the main concern was tort law. All of the proposals require legislation. Moreover, the proposals only govern federal law, a relatively small part of all tort law. There are a total of 22 recommendations, divided into nine categories. The categories are: Voluntary Dispute Resolution; Discovery; More Effective Trial Procedures; Expert Evidence Reform; Punitive Damages; Improved Use of Federal Judicial Resources; Enhanced Incentives for Encouraging Meritorious Litigation; Reducing Unnecessary Burdens on Federal Courts; Eliminating Litigation Over Poorly Drafted Legislation. It is interesting that none of these proposals deal with nonpecuniary damages, and none deal with potential contractual issues.

Bovberg, Sloan and Blumstein (1989) and Niehaus and Snyder (1992) propose scheduling damage payments for pain and suffering. This proposal is not inconsistent with my argument. If consumers prefer scheduled payments for pain and suffering, then such payments will be made available. However, as I indicate below, I believe that consumers would actually prefer no payments for these

nonpecuniary losses. A contract solution does not require that we decide this issue; participants in the market will reach their own decision.

In sum, it is clear that the proposals advocated here are much simpler than many of the proposals in the literature. While they may have other advantages as well, their relative simplicity and ease of adoption are a strong argument for them. Moreover, the proposals may be achievable with no legislative reforms, through only change in private contractual terms.

WHY ONLY DAMAGES?

At this point, the reader might wonder why I limit my proposal to contractual specification of damages. Why not allow contract to return to the entire class of events associated with products liability law? While there are strong arguments to be made for this proposal (e.g. Epstein, 1986; Danzon, 1984; Priest, 1985; Huber, 1988; Havinghurst, 1986), there are some theoretical and practical advantages for limiting the proposed reform to damages.

First, as discussed in the next chapter, there are theoretical arguments advanced by Landes and Posner (1987) and Shavell (1987) which support the movement from contract to tort in products liability matters. I myself do not accept these arguments, for reasons discussed in Chapter 2. However, even if they are correct, their arguments apply to liability rules but not to damages. Therefore, it is less likely that reform limited to damages would do harm than would a complete return to contract if Landes-Posner and Shavell are correct. Moreover, it may be easier to convince

others of the strength of the argument if there are not powerful intellectual forces making counterarguments.

Second, there is a greater probability that the courts will accept contracted rules for damages than for liability. The principles of law which reject contracted liability rules are quite settled, and precedents are strong. (This issue is discussed in Chapter 6.) There are no precedents dealing solely with damage limitations. Therefore, the courts will more easily be able to adopt such contracts if they so desire.

Third, as mentioned above, some states have already adopted damage caps by statute. A principle of damage limits by contract is less invasive than are damage caps. Therefore, it may be easier to get legislative approval of the proposal here than of a more comprehensive proposal, if legislative approval turns out to be required.

Fourth, the benefits of limiting damages in this way may be greater than first appears. As discussed later, a limitation to contracted damages would probably reduce expected damages by about 50 percent. If damages are reduced by this amount, then the incentive for filing cases is reduced. This would particularly apply to cases based on novel theories of liability, since the expected returns to attorneys of such litigation would be reduced by limiting potential damages but the expected costs would not change.

Evidence from states which have adopted various forms of tort reform indicates that by far the most powerful change for limiting

malpractice premiums is a damage cap. Such caps can lower malpractice insurance premiums by about 34% (Zuckerman, Bovberg and Sloan, 1990.) Since I hypothesize that consumers would completely eliminate compensation for pain and suffering, rather than merely capping it, the proposal here would probably lower premiums by even more than this.

Fifth, the proposals are less inconsistent with claims of supporters of tort law than other proposals for reform. This means that my proposal might generate less academic hostility than would other proposals. For example, Mehlman (1990) believes that principles of fiduciary law rather than contract should govern product related accidents. This leads to an emphasis on asymmetric information regarding risk probabilities. However, his argument would not apply to information about desired compensation for whatever injuries did occur. Thus, the proposal here may not be inconsistent with Mehlman's claims. Bell (1990) seems somewhat confused on the economic arguments regarding nonpecuniary losses; for example, on p. 1197 he argues that the only saving from contractual specification of damages would be reduced transactions costs. Later (pp. 1232-1233) he seems to argue for nonpecuniary damages as a form of deterrence, again without understanding the economic analysis. Nonetheless, the heart of his analysis is a discussion of asymmetric information (pp. 1225-1229) and there is less reason to believe that such lack of understanding would be relevant for damage principles than for liability standards.

Sixth, as we will see in Chapter 5, there are no good measures

of nonpecuniary damages. In general, if there is uncertainty about expected damage payments, then litigation is more probable. Restricting damages to pecuniary losses would therefore make damage payments much more predictable. If damages are more certain, then the probability of litigating those cases which are filed will be reduced and out of court settlement will be more likely. This will also be a significant benefit of eliminating nonpecuniary losses.

Finally, we may view the reforms suggested here as a first step. If parties do limit damages as I predict and if the courts do honor these contracts, then we may be able to move back to a more soundly grounded contractual regime. After all, the change from contract to tort was not a single one step change, and there is no reason to expect the movement back to contract to be a single move either.

CHAPTER 2: ECONOMIC LITERATURE ON CONTRACTS AND TORT

Many writers in the law and economics tradition have advocated a return to contract principles in product liability litigation (e.g, Coleman, Calfee and Rubin, Danzon, Epstein, Havinghurst, Priest.) In spite of these writings, it is fair to say that the conventional view in the economics of law literature is that contract is not desirable for products liability law. The two major treatises on the economics of torts (Landes and Posner, 1987 and Shavell, 1987) disagree on various points, but both argue that contract is not an efficient solution to risks associated with purchased products. This has led Huber (1988, p. 6), a major critic of modern tort law, to suggest that "legal economists" have provided sophisticated justifications for changes in modern tort law.⁴ (A major textbook in the field, Cooter and Ulen, 1988, p. 430, does indicate that "...the older common law, by basing recovery for product-related harms on contract principles through the requirement of privity, may have had strengths that are not generally recognized today.")

The basic argument against contractual solutions for product liability problems is best summarized by Landes-Posner:

The answer [to the question, Why not a contractual solution?] is that contracts are costly to make and that the costs may well exceed the benefits, relative to regulation by tort law, when the contingencies that would be regulated by

"Arriving on the scene of the great tort battle late in the day, they [the legal economists] courageously congratulated the victors, shot the wounded, and pronounced the day's outcome satisfactory and good." In the set of legal economists, Huber includes Guido Calabresi, Richard Posner, and "many others, for economists seem to be almost as numerous as lawyers."

contract -- death or personal injury from using a product - are extremely remote... But the greatest cost would not be the direct cost of drafting; it would be the cost of information. The inclusion of such a clause [dealing with potential liability] would not serve its intended purpose unless the consumer knew something about the costs of alternative safety measures that the producer might take and about the safety of competing products and brands. But the cost of generating that information and particularly the cost to the consumer of absorbing it, may well be disproportionate to the benefit of a negotiated (as distinct from imposed-by-law) level of safety.

What makes the problem of information serious is that the consumer may not have much intuitive feel for an extremely small risk... [p. 280-1; footnote omitted]

Shavell (p. 61-62) agrees that if consumers correctly perceive risks, then contracts (in the form of warranties) between consumers and firms for allocating risks would be efficient, but that if consumers have erroneous perceptions, such warranties would not lead to efficient behavior for reasons similar to those advanced by Landes-Posner.

In a way, it is odd that the economic justification for replacing contract with tort in products liability rests on a deterrence theory. Priest (1985) in his essay on the origins of modern products liability law demonstrates that supporters of such law (primarily Fleming James, with an assist from Friedrich Kessler's attack on contract) rested their case on a risk spreading (that is, compensation) rationale and considered deterrence irrelevant. Epstein (1985) also indicates that the insurance was a prime rationale of the expansion of products liability law. Thus, economists justify a legal doctrine in terms of arguments explicitly rejected by those who were the leading advocates of adopting the law, and the economists reject the insurance function

which advocates of the law used to justify its expansion. This position is not dispositive; the law could be serving a function which its founders did not understand or envision. However, there are several additional problems with the economic analysis as typified by the Landes-Posner passage quoted above.

INCONSISTENCIES

One problem is a lack of consistency between these arguments and arguments made elsewhere by Landes-Posner and Shavell. Both treatises are generally based on complex economic analysis of tort law as providing incentives for efficient behavior in several contexts in addition to the producer-consumer context. For example, they argue that in torts involving strangers (those with no contractual relationship) legal standards such as negligence with a defense of contributory negligence are efficient if the standard of care is chosen correctly. Similarly, pure negligence and comparative negligence are also efficient.⁵ These legal standards will give both potential injurers and potential victims incentives to take optimal care.

But consider what is involved in enforcing a standard of negligence with a defense of contributory negligence. A victim is contributorily negligent if he fails to take optimal precautions given that the injurer was taking optimal precautions. This means that a consumer (potential victim) must understand exactly what

⁵This result is standard in the economic analysis of law, and goes back to Brown, 1973, the first formal economic analysis of efficient tort law. Brown was incorrect on comparative negligence; for an analysis showing the efficiency of this standard, see Haddock and Curran, 1985.

precautions a potential injurer should take and then understand exactly which precautions he (the victim) should take given the optimal behavior of the injurer.

For example, a pedestrian should understand exactly how fast a driver should go and then the pedestrian should decide how carefully to proceed given that the driver is proceeding at exactly this speed. If the pedestrian uses less care than this, he is contributorily negligent and cannot collect if injured. The driver, the potential injurer, must understand the pedestrian's solution to this problem and then the driver must use this solution to determine how fast he may safely drive. If he drives faster and the pedestrian is injured, the driver is negligent and therefore may be liable.⁶ Both parties must also understand that the legal standard requires exactly this behavior.

I do not want to be interpreted as claiming that this analysis is incorrect or that the parties cannot undertake these seemingly complex calculations. It is standard economic analysis of response to incentives, and there is no reason to believe that injurers and victims cannot respond optimally to incentives, even if they cannot explicitly perform the required calculations. Economists generally assume ability of economic agents (consumers and producers) to respond to complex incentives, and I myself commonly make such assumptions (e.g., Rubin, 1983.) However, what is inconsistent is

⁶What happens when both are negligent depends on the exact standard and need not concern us since the argument is that any of the standards mentioned will give both parties incentives not to be negligent and this is all that is relevant for the analysis.

to argue that persons can optimally calculate the required behavior in stranger contexts but are unable to determine which contracts they should sign (or which warranties they should accept) in product liability contexts.

Accidents between strangers are approximately as rare as accidents involving products. Therefore, it is not obvious that consumers would have better information about methods of preventing accidents in stranger settings than about methods of preventing accidents in potential contractual settings. Landes-Posner and Shavell assume that consumers can make careful complex calculations about risk in driving a car, but are totally unable to make similar calculations in buying the car in the first place.

Moreover, for a legal standard to have an incentive effect parties must know not only the technology of accident prevention, but also the standard of care. This means that more knowledge may be required in a non-contractual setting than in a contractual setting. Therefore, it seems inconsistent to claim that information problems would make contracts not feasible as a part of a more elaborate argument that relies on efficient response to incentives in situations where information is equally expensive and unavailable. That is, there is no reason to expect that tort law would provide efficient accident avoidance incentives if consumers are too ignorant to sign efficient accident avoidance contracts. Conversely, and of more relevance for my point, there is no reason to assume that consumers are able to make complex calculations regarding negligence standards but are unable to sign efficient

risk spreading contracts.

SOME PRODUCTS REDUCE RISK

A second problem with the Landes-Posner and Shavell analyses is that both begin with the assumption that products add to injury risk.⁷ While this assumption appears natural, it is in many cases flawed. As discussed more fully in Chapter 5, many cases involving products liability are cases where the product actually reduces risk relative to nonuse of the product. This applies to medical care, pharmaceuticals, and also to many other goods and services involved in tort litigation. Airplanes, for example, are risk reducing relative to automobiles, which are themselves risk reducing relative to bicycles or motorcycles, or horses. (For further discussion see Huber, 1985.)

For products which reduce risk, the general analysis of Landes-Posner and Shavell, which assumes that products increase risk, will be incorrect. For risk increasing products, one purpose of tort law is to induce consumers to avoid overusing the product (what is called in the literature the "activity level" issue.) However, for risk reducing products, the goal of tort law should be to avoid discouraging use of products in cases where the alternative is to accept even more risk. This requires focusing on the role of tort liability in affecting the price of the product. Contractual specification of damages will enable consumers to take account of price and compensation issues.

⁷This assumption dates to Spence, 1977. It is the basis of Shavell's well known paper on strict liability and negligence; Shavell, 1980.

LIMITED ROLE OF CONTRACTS

My analysis so far would argue in favor of allowing contractual specification of liability rules in product injury cases, and indeed in all situations where consumers and producers are in contractual relations with each other. While I would generally favor such a solution, I do not need to go this far. In this book, I suggest only contractual specification of damage payments, not of liability rules. Even if we fully accept the arguments of Landes-Posner or of Shavell, this proposal is consistent with their reasoning, although they do not directly address the specific issue of contractual limits for damages. However, the general arguments they make against contractual specification of liability rules do not apply to contractual specification of damages.

A key point made by both Landes-Posner and Shavell is that in the case of complex products consumers will not have adequate knowledge of accident avoidance technologies. Landes-Posner, p. 285: "The growth in the technical complexity of products (the horse and buggy giving way to the automobile, patent medicines giving way to modern medicines, fresh foods giving way to canned and frozen foods, and so on) has been accompanied by a relative decline in the technical knowledge of consumers as consumers." Shavell, p. 54: "In particular, customers' knowledge of risks attending the use of a wide class [^] modern-day products (automobiles, drugs, power machines) is presumably limited in significant ways because of consumers' quite natural inability to understand how the products

function."⁸

Even if we accept that this consumer ignorance means that consumers cannot efficiently contractually specify the appropriate level of care to be taken by manufacturers, this ignorance of technology has no implications for desired levels of compensation. That is, a consumer can measure the desired level of compensation in the event of a mishap even if he knows nothing about the probability of the mishap or about the technology of accident causation or prevention. Moreover, in general, there is no relation between the cause of the accident and the desired form of compensation. A consumer might want to be reimbursed for medical expenses and lost earnings, but this desire will be the same for any cause of injury or death. We all buy life and health insurance in which the payment does not in general depend on the cause of illness or death, and we need not consider the probabilities of each type of harm or the causes of various harms in buying this insurance.

Additionally, the form of desired compensation would be independent of the state of technology. A consumer may understand a horse better than a car, but would want the same form of

⁸As an aside, note that many of the specific examples in the parentheticals of both Landes-Posner and Shavell are risk reducing products. Modern medicines are safer and more effective than patent medicines; canned and frozen foods, by spreading the consumption of fruits and vegetables over the course of the year and by reducing risks of contamination, are life enhancing; power machines, by reducing the amount of labor needed in heavy production tasks, are safety increasing. Even automobiles are safer per mile than horses and buggies, and by increasing transportation speed, they undoubtedly lead to increases in life expectancy.

compensation if kicked by a horse or run over by a car. Therefore, arguments that changes in product liability law have been caused by increasing complexity of products (Landes-Posner, p. 284) do not explain changes in damage levels over time.

In sum, even if we accept the arguments of Landes-Posner and Shavell regarding contractual specification of liability rules, these arguments say nothing about the desirability of contractual specification of damages. In particular, if consumers would ex ante prefer not to pay for compensation for nonpecuniary damages, then they should be able to specify this in contracts and their inability to understand injury mechanisms would be irrelevant.

THEORETICAL DIFFICULTIES

One point made by Landes-Posner is that their theory of the common law, that the law is efficient, is the only theory available. Indeed, the text of their book begins:

This book explores the hypothesis that the common law is best explained as if the judges who created the law through decisions operating as precedents in later cases were trying to promote efficient resource allocation. We call this hypothesis the positive economic theory of tort law because no rival economic theory of tort law has been proposed. (p. 1, emphasis in original.)

There are two problems with this argument. First, Landes-Posner themselves find some parts of the law inefficient. They are then forced to rely on ad hoc appeals to various unmeasurable transactions costs to explain why some parts but not others are efficient. Second, I have elsewhere proposed an alternative theory of the law which may be more general than the Landes-Posner theory in that it explains both those areas where the law appears to be

efficient and areas where it appears inefficient (Rubin, 1982.)

Inefficient Laws Landes-Posner claim that the common law of torts is inefficient in awarding damages in wrongful death cases. The law now awards "pecuniary" damages (damages to replace lost earnings) but not "nonpecuniary" damages (damages based on, for example, lost enjoyment of life.) I discuss this issue at length in Chapter 3. There, I conclude that this is the efficient level of damage awards, and that movements in the law to increase damage awards are inefficient. Thus, there is an argument that the common law was efficient in its awarding of damages, and that in one area where Landes-Posner disagree with the law, they are incorrect.

If we believe their general theory, that the best positive theory of the common law is a search for economic efficiency, then my argument advanced here is at least as likely to be correct as their argument. They claim that the rules of "normal" torts are efficient, and I have no quarrel with this claim. However, they claim that the rules of damages in all wrongful death cases (normal torts and product liability torts) are incorrect; I claim that these rules are correct. I argue that the rules of product liability which deny consumers the right to contract are incorrect, and they claim that these rules are correct. Thus, it is not clear whether the Landes-Posner theory or the theory advanced here puts more faith in the efficiency of common law.

An Alternative Theory⁹ The alternative theory is that the law

⁹This section is based on Rubin, 1982, reprinted with modifications as Chapter 2 of Rubin, 1983.

is shaped by litigants, rather than by judges. Certain classes of litigants will use the litigation process to seek certain outcomes. In this theory, the main pressure is from organized groups. That is, those types of litigants who can most easily organize will use various tools (spending more on cases, relitigating until the law becomes favorable) to seek gains. When there are few organized litigants, the law will roughly seek efficiency. This theory is a natural outgrowth of the now standard economic theory of legislation, as in Stigler (1988).

In this theory, the structure of the law can best be understood by examining the ability of different classes of litigants to organize and seek their goals. Tort law has been influenced by the ability of victims (or their attorneys) to organize. (This is discussed in Keenan and Rubin, 1988. For a discussion of the Association of Trial Lawyers of America (ATLA) as an organized interest group with an interest in litigation from the plaintiff's side, see Sowle, 1991, pp. 37-41.)

As transactions costs of organization change, the ability of various interest groups to become established also changes. Thus, it is now possible for victims of a class of accidents and their attorneys to organize. Most or all major tort cases (Agent Orange, Benedictin, Manville and other asbestos cases, toxic shock, Dalkon shield, breast implants) show that there are organized groups of plaintiff's attorneys. Organized "public interest" groups also participate in product liability litigation, and receive financial support from plaintiff's attorneys. Chase, 1992, indicates that

the Public Citizen Health Research Group (a Nader group, headed by Sidney Wolfe) has sold "how-to-sue" kits regarding breast implants to plaintiffs attorneys.

If plaintiff's attorneys are a smaller, more easily organized group than defendants, then the theory discussed here argues that this could explain recent changes in tort law. If defendants can also organize, then they can work to change tort law. The theory does not distinguish between lobbying (using the legislature to achieve desired change) and litigation (seeking desirable precedents through the court system.) Parties will use whichever tool is most suitable for a given purpose.

This theory can explain the relative efficiency of the law (common and statute) before about 1900 because costs of organization were too high, and the relative inefficiency of much law after that period, as various interest groups organized and used the law for "rent seeking" purposes. It can also explain the major battle now occurring between those in favor of maintaining or increasing the scope of current tort law, and those in favor of returning to an earlier regime.¹⁰ This battle is occurring on both the legislative and the litigation fronts, as the theory would indicate.

SUMMARY

The current economic theory of tort law (Shavell, 1987;

¹⁰This book is of course a part of that battle. However, it is possible to evaluate intellectual arguments on their own merits, and I hope to convince the reader that the arguments are intellectually correct.

Landes-Posner, 1987) suggests that contract would not be an efficient solution to product liability law problems. However, this theory is flawed in several dimensions. First, it assumes that consumers have the ability to perform all needed calculations in third party accident situations (for example, in taking care when driving a car) but not in first party situations (taking care in purchasing a car.) There is no justification for such an assumption. Second, the theory assumes that products add to risk, but many products (and many involved in tort litigation) actually reduce risk. The Landes-Posner version of the theory assumes that tort law is efficient, but also argues that some doctrines are inefficient. They also argue (incorrectly) that there is no alternative positive theory of law other than the efficiency theory. Therefore, the current theory cannot justify the arguments that contract is inefficient in tort law.

However, even if this theory is correct, it applies to contractual negotiation over liability rules. The argument advanced in this book deals with damages, and the current theory says nothing about efficient contracting for damages. Thus, even if I am wrong and the current theory is correct, it is not inconsistent with my policy proposals.

CHAPTER 3: DAMAGES AS COMPENSATION

In this chapter, I consider tort damages as compensation for losses caused by accidents involving purchased goods or services. The key point is that efficient damages for compensation which would be preferred by consumers would entail levels much lower than now awarded by the tort system. If consumers could contractually specify the level of damages from injuries involving product malfunctions, they would not want to include some forms of compensation which the courts now award. In particular, consumers would want compensation only for lost earnings and for some part of medical expenses. They would not want compensation for pain and suffering, emotional distress, or "hedonic" values of life. They would not want the possibility of receiving large punitive damage payments.

To better explain the points involved, I first provide some definitions and some preliminary analysis. I distinguish between pecuniary and nonpecuniary damages, and discuss their relationship to the marginal utility of wealth. I then discuss the economics of insurance; this discussion is in two parts. This analysis will indicate that consumers do not generally desire insurance against certain forms of harms, and that providing such insurance through product liability doctrines will not benefit consumers. If consumers could freely contract, they would not want such damages to be paid in the event of an accident.

One key point underlies the analysis. Before an accident occurs (a time called ex ante by economists), consumers would not

want to pay the expected cost of certain forms of compensation to be paid after an accident. After an accident has occurred (ex post), if injured consumers have the right, then they will sue for whatever damages the courts will award. Thus, ex ante, consumers would be willing to sign contracts agreeing not to sue for certain forms of damages. However, if the courts will not enforce these contracts, then injured consumers as plaintiffs ex post will attempt to gain these additional payments. The efficient level of damages is that which consumers would want before they are injured because at this point consumers will compare the expected costs and benefits of alternative levels of damages. It is for this reason that enforceable contracts are necessary.

SOME DEFINITIONS:

Pecuniary and Nonpecuniary Losses Economists commonly distinguish between two types of harms or losses which may occur as a result of an accident. Pecuniary losses are those which can be fully replaced. These would include lost earnings, costs of medical care, and losses of property (a damaged car, a house destroyed by fire.)

Nonpecuniary losses are losses which cannot be replaced. "Pain and suffering" is a nonpecuniary loss. So are losses associated with many forms of injury, such as a lost limb. (If this lowers potential earnings or increases costs of, for example, specially modified automobiles, then these costs would be pecuniary, as would medical costs.) A relatively new form of damages awarded by some courts, "lost enjoyment of life" (sometimes

called "hedonic" damages) is also a nonpecuniary loss. In some cases, courts have awarded damages for worry associated with a potential loss, such as the fear that a heart valve may break. This is a nonpecuniary loss. Loss of some forms of property such as family pictures or heirlooms with little monetary but large sentimental value, or even the family dog, would entail nonpecuniary loss. The ultimate nonpecuniary loss is death of oneself or of one's relatives. Pecuniary and nonpecuniary losses differ in their effects on the consumers' utility function, to be discussed next.

Marginal Utility of Wealth The utility function is the way in which economists represent the relations between happiness and wealth. Everyone is happier with more wealth. That is, for everyone total utility increases as wealth increases, or, mathematically, the utility function has a positive slope. However, what is of interest for many problems is the rate at which happiness increases as wealth increases. This rate of change is what is called the marginal utility of wealth.

In theory, happiness (utility) can increase at the same rate as income, at a lower rate, or at a higher rate. If utility and wealth increase at the same rate, there is said to be constant marginal utility of wealth. If utility increases faster than wealth, there is said to be increasing marginal utility of wealth.

In general, evidence indicates that for most consumers, there is decreasing marginal utility of wealth: the marginal utility of wealth decreases as levels of wealth increase, as shown in Figure

1. Figure 1 shows the relation between total utility and wealth; the slope of the total utility curve is the marginal utility of wealth. Since the curve gets flatter (the slope decreases) as wealth increases, the marginal utility of wealth is decreasing with increases in wealth.¹¹ (Note that the curve is everywhere positively sloped, indicating increasing total utility as wealth increases.)

This decreasing marginal utility explains why consumers are "risk averse." Most consumers will not accept an exactly fair gamble for large sums of money; most of us would not bet half of our annual salary on the toss of a coin. This is because the increase in "utility" from gaining an extra half years' salary is less than the loss in utility from losing the same amount of money. As we will see, risk aversion also explains the purchase of insurance for some potential large losses such as a house fire.

This concept is relevant for the analysis of optimal compensation for accidental losses because different types of losses have different effects on the marginal utility of wealth. Pecuniary losses reduce the total utility of wealth but leave the schedule relating wealth and utility unchanged. In Figure 2, a pecuniary loss is a movement from A to B. The total amount of wealth is reduced but the schedule is unchanged. Note that as the total amount of wealth is reduced, the marginal utility increases

¹¹Constant utility would be shown by a straight line and increasing marginal utility be a curve which became steeper as we moved to the right. However, in what follows I will consider only decreasing marginal utility since this is the most empirically relevant case.

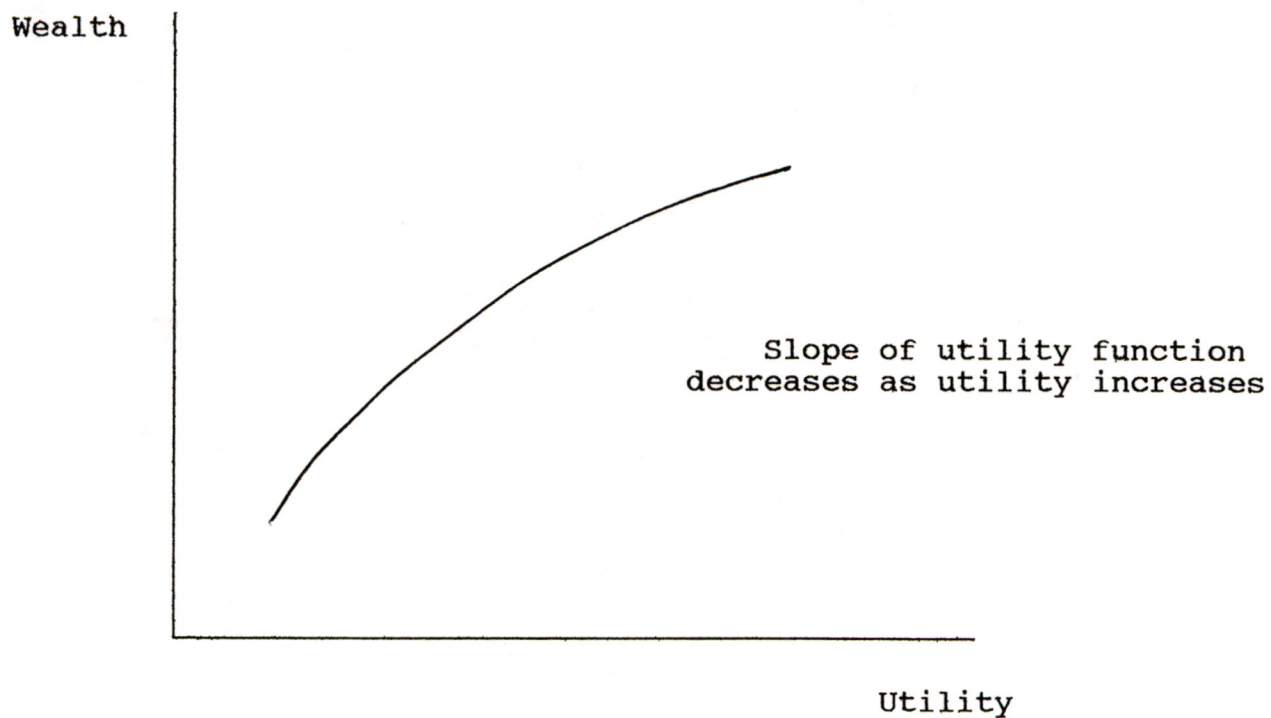


Figure 1: Decreasing Marginal Utility of Wealth

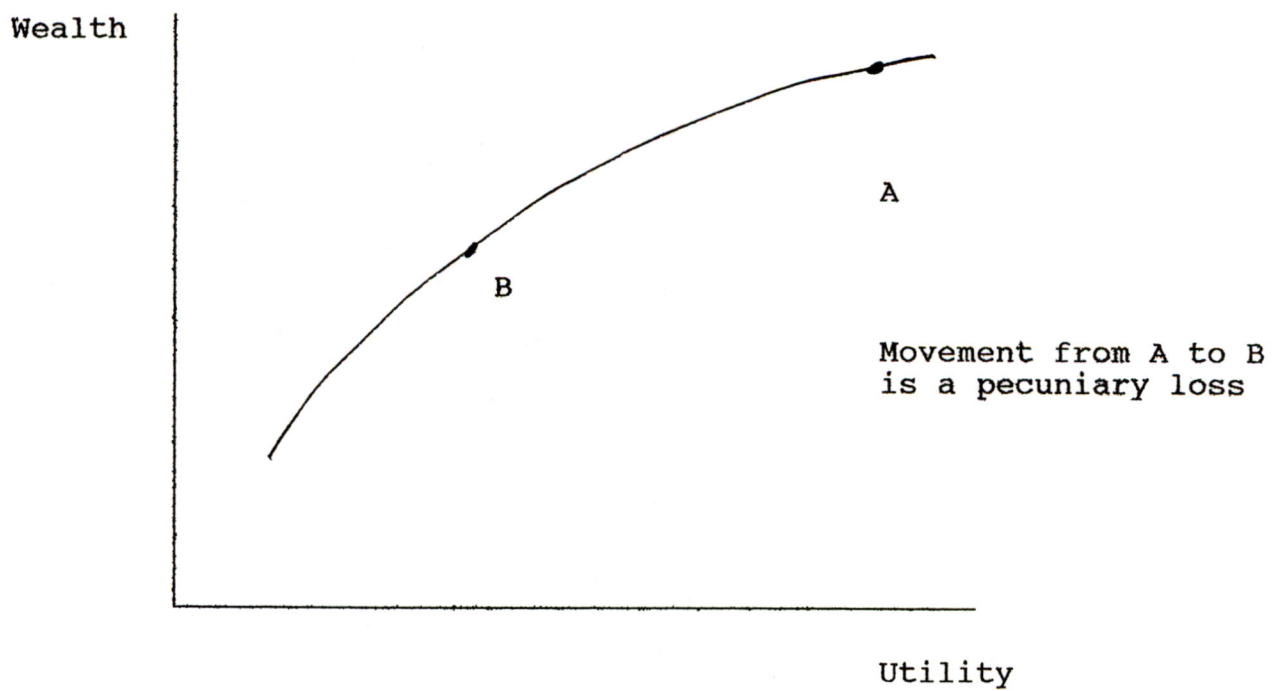


Figure 2: Pecuniary Loss

because of the assumption of diminishing marginal utility. (Marginal utility diminishes with increases in wealth, so it increases with reductions in wealth, such as from an accidental pecuniary loss.) If our house burns down (neglecting insurance), we move from A to B; we are poorer and therefore our marginal utility of wealth is higher. This is because we want money to buy a new house to replace the loss. As we will see below, consumers would want to insure against this sort of loss. (The analysis is from Cook and Graham, 1977; Rea, 1982; and Graham and Pierce, 1984.)

Nonpecuniary losses do not merely move consumers along a fixed utility function. They actually change the utility function. That is, as a result of a nonpecuniary loss, the relations between income and wealth is altered. There are several possibilities.

One possibility is that the nonpecuniary loss merely shifts the utility function downward in a parallel move without having any effect on marginal utility; this is shown in Figure 3. In this case, the consumer is worse off as a result of the accident because total utility is reduced, but the marginal utility of wealth is unchanged at any income level. That is, the slope of the total utility curve is unchanged at any level of income. A loss such as the loss of the family heirloom would represent this type of shift. An important point, developed more fully in the next section, is that consumers would not want to insure against this sort of nonpecuniary loss.

An even more severe case is that in which the accident changes

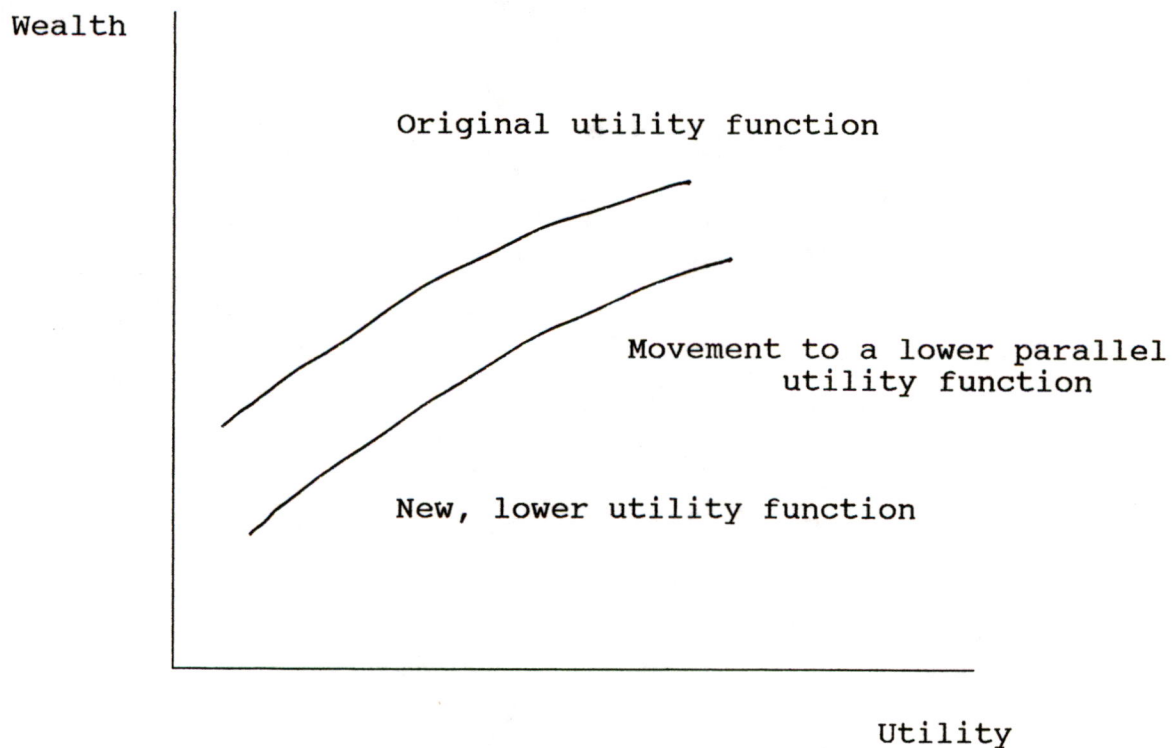


Figure 3: Nonpecuniary Loss, No Change in Marginal Utility

the slope as well as the level of the marginal utility schedule, as shown in Figure 4. Here, for any given level of wealth, the consumer derives less utility from an additional dollar after the accident than before. One example would be a serious injury which reduces the ability of the consumer to enjoy consumption.¹² An even more extreme example would be death: in the event of death, the marginal utility of wealth is zero for the decedent.

For a tragic but informative example, consider the effect on utility of parents' wealth of the death of a child. Clearly, total utility (overall happiness) is greatly reduced: there is probably no more tragic event. Marginal utility of wealth is also reduced. That is, the value of additional money is reduced. Parents will not need money to feed, clothe, and educate the deceased child. Thus, a policy which provides parents with additional wealth in the event of such a death will not necessarily be worthwhile.

SOME ECONOMICS OF INSURANCE I: PURPOSE OF INSURANCE

Consider a possible accident which reduces the level of wealth but does not change the utility schedule; that is, consider an accident leading to a pecuniary loss. A paradigm example is the loss of a house to a fire with no personal injury or death (and, for simplicity, no irreplaceable heirlooms or pets lost in the fire.)

¹²In theory, such an accident might increase the marginal utility of wealth. However, empirical evidence (Viscusi and Evans, 1990) indicates that this is not typically what happens. Rather, accidents typically reduce the marginal utility of wealth, presumably by reducing the ability of injured consumers to enjoy consumption activities.

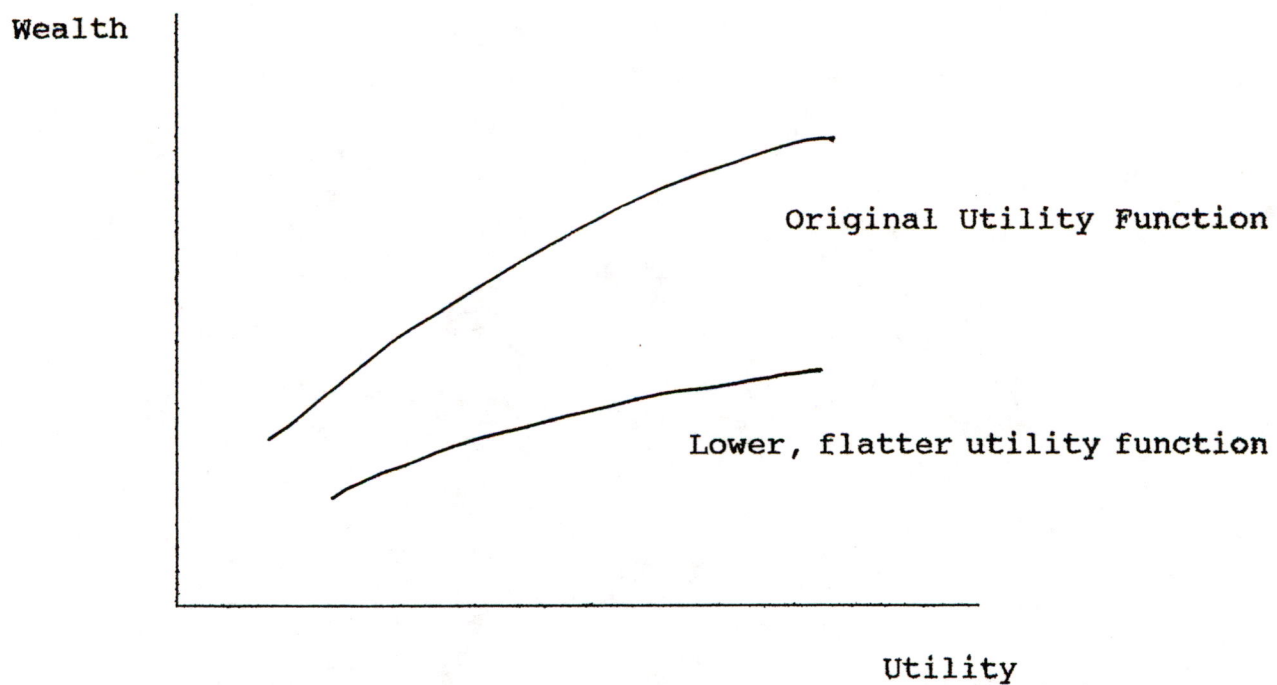


Figure 4: Nonpecuniary Loss, Reduction in Marginal Utility

Consider now two possible states of the world: one in which the accident occurs and one in which the accident does not occur. (Of course, the state in which the accident does not occur is much more probable than the state in which it does occur.) If the consumer does not have insurance, then marginal utility of wealth is much higher (because wealth is much lower) in the state with the accident. (This would be equivalent to a move from A to B in Figure 2 above.) As a result, the consumer would like to transfer wealth from the no-accident state to the accident state because he would gain utility by such a transfer. Since the marginal utility is lower in the no-accident state, the loss in utility from reducing wealth by one dollar in the no-accident state would be less than the gain in utility from increasing wealth by one dollar in the accident state. (Note that this depends on the assumption of risk aversion.) The consumer would like to continue this process until the marginal utility of wealth is exactly the same in both states of the world. It is at this point that total utility is maximized.¹³

Insurance allows the consumer to transfer wealth from low marginal utility states of the world to high marginal utility states, and thus to maximize expected utility. Consider the house fire example. There is a 1% chance of a house fire in any year

¹³Those familiar with economics will recognize this as a simple maximization problem, of the sort commonly encountered in economic analysis. The structure of the problem is to maximize expected utility (utility weighted by probabilities) across various states of the world, subject to a total wealth constraint. The equalization of marginal utilities is the first order condition for solving this maximization problem.

which will destroy a \$100,000 house. The actuarially fair price of insurance is \$1000 per year. If the consumer purchases insurance, he is \$1000 poorer in the state of the world in which the house does not burn down, and \$100,000 richer in the state in which it does burn down.¹⁴ The consumer has effectively transferred wealth across states of the world in exactly the manner discussed above: he has reduced wealth in the low marginal utility state (the no-accident state, where wealth is reduced by the \$1000 premium) and increased it in the high marginal utility state of the world (the fire state, where actual wealth is increased by the \$100,000 payment from the insurance company). This has maximized his expected utility.

SYNTHESIS

We are now ready to put the pieces together. Pecuniary losses shift the consumer downward along a utility function and thus increase the marginal utility of wealth. It is therefore desirable to insure against pecuniary losses (when the cost of insurance is not too high) and most consumers do insure against such losses. We all carry fire insurance. Many of us have life insurance to replace earnings lost by our families if we die. We also insure against many other large pecuniary losses.

¹⁴Actually, the consumer would have to pay more than \$1000 for the insurance because of the costs of selling and administering the insurance. With a premium not too much greater than \$1000 the consumer would still benefit from the insurance; the amount above \$1000 a given consumer would be willing to pay would depend on his degree of risk aversion. As we see below, consumers are not infinitely risk averse, so a high enough premium would discourage purchase of insurance.

Nonpecuniary losses, on the other hand, do not increase the marginal utility of wealth. Some losses leave it unchanged, but many of those involved in product liability cases reduce the marginal utility of wealth. We would not expect consumers to insure against such losses, and indeed we observe that they do not.

Some examples:

Death of a Breadwinner Consider a family with one earner. The family depends on this person for their income. If the breadwinner dies, then the family will be poorer (absent insurance) and therefore the marginal utility of wealth will be higher. We would therefore expect families to insure against this loss, and indeed, most breadwinners with children carry insurance for their families in the event of death of the main earner. This death creates a pecuniary loss to the survivors. Note that the amount of insurance which should be carried should be the earnings over and above the amount the breadwinner would himself have consumed, since this is the loss to the survivors. If the breadwinner dies, the family will suffer a nonpecuniary loss as well (assuming normal patterns of love and affection), but we would not expect and do not observe insurance against this loss.

Death of a Child To see this last point more clearly, consider the example of the death of a child. Most families do not carry life insurance on their children. (Some carry enough to bury a child, a pecuniary loss.) This is not because the families do not love the child, or because they will not suffer a loss in the event of death. It is because, while there is a major loss, the

loss does not increase the marginal utility of wealth, but rather reduces it.

What would be involved if the family did purchase life insurance on a young child? Assume that a \$100,000 life insurance policy could be purchased for \$50 per year, approximately the actuarial price. Then if the child lives, the family, which has expenses associated with feeding and clothing the child, is \$50 poorer. If the child dies, then the family has less need for money, but is \$100,000 richer. This is not a good trade for the family, and it is not surprising that most people carry little if any life insurance on children.

Serious injury Assume that a person suffers serious injury, and that the injury will never be "cured." For example, one is paralyzed and confined to a wheelchair, or loses a limb.

This creates increased value for medical care -- or, the marginal utility of wealth used to purchase medical care increases. As a result, we would expect and we observe people purchasing insurance for medical care in the event of injury. On the other hand, the marginal utility of additional wealth is reduced to a level below its value in the uninjured state. Therefore, we would not expect people to fully replace income for disability, and we do not observe such full replacement.

The injury also creates a large nonpecuniary loss, since utility is much lower as a result of such an accident. Nonetheless, we would not expect people to insure against this loss, and indeed, they do not.

Slight Injury Finally, consider a minor injury which will entail some medical expenses, some loss of work and some pain, but from which there will be full recovery. We would expect (and we observe) consumers to insure against the first two components of loss. Medical insurance covers medical costs of injuries. Most jobs involve compensation for days off due to sickness or injury. Firms offer such compensation because workers implicitly demand it since it provides efficient insurance. On the other hand, there is virtually no market for insurance for pain and suffering. Apparently consumers do not find such insurance worth buying. This is again consistent with the theory -- pain and suffering does not raise the marginal utility of wealth, and so does not create a demand for insurance.

In sum: Consumers buy insurance to equate marginal utilities in possible states of the world. Pecuniary losses such as loss of income from an injury, loss of earnings from a breadwinner or loss of a house from a fire increase the marginal utility of wealth, and consumers shift income to such accident states by purchasing insurance. Some harms (severe incurable injury, pain and suffering, death) do not lead to increased marginal utility of wealth and consumers do not insure against these harms.

IMPLICATIONS

These results have important implications for damage payments in the event of injury as a result of a tort. In particular, since consumers do not want compensation for nonpecuniary losses, then ex ante (before the accident occurs) consumers would prefer not to

pay the expected cost of compensation to be awarded for this class of harms if an accident should occur. That is, consumers would prefer that the price of a product be lower and not include insurance for nonpecuniary losses.

Of course, after an accident occurs, an injured consumer (or the estate of a dead consumer) will seek compensation for nonpecuniary losses if allowed to do so. Producers, knowing that consumers will behave this way, will charge a price for the product which includes the expected compensation for nonpecuniary damages unless they believe that the courts will enforce contractual limits on such damages.

This is the first major substantive point of the analysis. If they could do so, consumers would prefer to sign binding contracts limiting their ability to seek compensation for nonpecuniary losses in the event of an accident.

Even for pecuniary losses, there is an issue. Many injured persons will already have insurance themselves. For example, persons will have insurance coverage for lost wages through sick pay or through disability insurance. For these people, tort damages will serve as an extra payment. However, as argued above, injured persons desire less, not more, income, and so the prospect of additional income in an injured state will not be worth its cost. (The same point applies to medical care, discussed more fully in the next section.)

A method of handling this problem is for payments from the injurer to be paid to the injured's insurance company, if the

injured is insured. (In insurance terminology, this is called subrogation.) Such payments would not directly affect the price consumers would pay for the product, since the payments from the producer would not be in general any lower. (As indicated below, this is not true for medical payments.) However, if product liability payments generally went to direct insurers, then costs of direct insurance would be reduced. Thus, consumers might want their own insurance policies to be written with clauses which would require subrogation. If so, then the courts should enforce these clauses.

(The alternative would be to reduce product liability payments if the injured already had insurance, called "collateral sources." The collateral source rule says that consumers can collect both from their first party insurance and from the product causing the injury. Increasing subrogation is more efficient than modification of the collateral source rule. Modification of the rule might provide insufficient incentives for producers to take care. The incentive problem is addressed more fully in the next chapter.)

SOME ECONOMICS OF INSURANCE II:

ADVERSE SELECTION AND MORAL HAZARD¹⁵

In addition to not wanting damages for pain and suffering, there are other contractual limits on damages which consumers would seek ex ante if they could do so. These arise from other aspects

¹⁵The analysis of moral hazard and of adverse selection is common in economics; for a discussion see Rubin, 1990. The application to problems of products liability and tort law is from an important paper by George Priest, 1987, although the specific recommendations should not necessarily be attributed to Priest.

of the problems of compensation as insurance. There are two problems which limit the ability of markets to offer insurance and which can make insurance contracts inefficient where they do exist. These are adverse selection, which occurs before insurance is purchased, and moral hazard, which occurs after insurance is purchased. Both of these affect compensation desired ex ante by consumers in the event of a product related injury.

Adverse Selection This occurs when a potential insured has relevant information about his own risk that is lacking to the insurance company. If clients can predict better than the insurance company that they are at risk of some mishap, then there are problems with insurance markets. In the limit, this problem can cause the market to cease to exist.

Rather than an analytical explanation, an example may clarify what is involved. Some years ago, the Washington, D.C. city council passed a law forbidding insurance companies from testing potential clients for HIV, the precursor to AIDS. Insurance providers immediately ceased offering new life insurance policies to residents of the District, and did not again sell such insurance until Congress forced repeal of the law. That is, immediately upon passage of the law, the market for life insurance in the District ceased to exist. This was the result of an extreme adverse selection problem.

Why? Consumers could themselves have HIV tests performed and determine if they had the disease. Thus, before purchasing insurance, a consumer could know if he was likely to get AIDS, but

the insurance company could not have access to the same information. Then it would have paid for anyone who tested positive to purchase large amounts of insurance. This is because the price of insurance reflected the risk of dying for the general population, but those who tested positive had a much greater chance of dying (faced a much larger risk) and therefore life insurance would have been a "good buy" for such persons.

Insurance companies could not determine who tested positive because of the law. Therefore, had they continued to offer insurance, they would have provided insurance at normal rates to those at extremely high risk of death. This would have led to large losses by the insurance companies. To avoid the ensuing bankruptcy, insurance companies ceased operating. The pool of insureds would have contained a much greater percentage of persons with HIV positive tests than would the general population, and so the cost to the insurance companies would have been much greater than from a randomly selected group of persons. The "risk pool" for the insurance company would have been too wide, including both HIV positive and normal persons.

This is an extreme example of adverse selection, but it does illustrate the relevant point. Adverse selection can hinder and, in the limit, eliminate insurance markets. It is always in the interest of insurance companies to narrow risk pools as much as possible. That is, it is in their interest to determine as precisely as possible the relative risk of each potential client. If clients know something about themselves that insurance companies

do not know, then there will be a general tendency for the lowest risk consumers to refrain from purchase of insurance and for high risk consumers to purchase the insurance.

Consumers lose from risk pools which are too broad. (In the D.C. example, the risk pool was overly broad because it would have included both HIV persons and those who did not test positive for HIV.) In the extreme case, they lose because the market will cease to exist. However, even in less extreme situations, some consumers lose because either they are paying too much for insurance or because they will choose not to purchase any insurance at all. (Even though consumers are generally risk averse, they are not infinitely risk averse, and as the price of insurance increases above the mathematically fair level, some consumers will drop out of the market.)

The relevance of this point becomes clear when we realize that damage payments at tort viewed as a compensation device have many of the characteristics of insurance. It is insurance that is bundled with the product. Moreover, if the courts will not honor contracts limiting damage payments, then it is insurance which the consumer must buy and pay for if he buys the product, whether he wants the insurance or not.

Adverse selection is a problem with all insurance contracts. However, when insurance is explicitly offered as insurance, then sellers are able to devise mechanisms which limit adverse selection by narrowing risk pools. For example, teenage drivers, drivers with bad accident records, and drivers of "hot" cars pay higher

automobile accident premiums than middle aged safe drivers of Volvos. Owners of brick homes near hydrants pay less for fire insurance than owners of wood homes in isolated areas. Overweight smokers pay more for life insurance than others, and men pay more than women since men die younger. (For the same reason, women pay more for retirement insurance.) Indeed, insurance companies compete partly by finding criteria which will narrow risk classes because this will give the companies a competitive advantage for the low risk consumers with respect to that criteria.

When insurance is sold bundled with products, anyone buying the product also buys the insurance, and the ability to control adverse selection is greatly reduced.

One component in which clients can differ is the amount of insurance. Consider life insurance. A policy for \$1,000,000 is a higher risk policy than a policy for \$100,000 for a consumer with otherwise identical characteristics, such as age and health status. That is, if the former insured dies then the payment is greater than if the latter dies. Insurance companies obviously separate the risks associated with the \$1,000,000 policy from those associated with the \$100,000 policy by charging a different fee for each. They do not average the two charges and charge the same premium for both policies. If they did, there would be adverse selection in that the \$1,000,000 policyholder would gladly buy the insurance, but the \$100,000 policyholder would not. Of course, the notion of charging the same amount for policies with different values strikes us as absurd.

But, although this notion is absurd, it is the standard way in which insurance through the tort system operates. Some airplane passengers earn \$500,000 per year and their estates may collect \$5,000,000 if they die in a crash; others earn and will collect one tenth as much. Nonetheless, if they fly in the same class, they pay the same amount for their tickets. But the tickets have the insurance bundled with them, and part of the price goes to pay for the insurance. Therefore, the tort system is forcing consumers into exactly the position which was seen to be absurd in the context of purchase of direct life insurance. Two persons are purchasing wildly different amounts of insurance but paying the same price.

Note also that this policy generally acts as a wealth transfer from the poor, who stand to collect relatively small payments in the event of death or injury, to the rich, who stand to collect more. Thus, in addition to being inefficient, this policy violates our notions of fairness.

If consumers could choose, they would not choose to be aggregated into one risk pool for insurance. Rather, low risk consumers would prefer to be in pools with other low risk consumers, and high risk consumers would not be able to achieve a subsidy from the low risk consumers. Since in the issues at hand risk is often associated with income, the forced transfer from the tort system would offend general notions of fairness as well as being inefficient.

Adverse selection operates in other ways within the tort

system as well. For example, different models of a similar product may be aimed at different classes of users. These different models may have differing safety features. A chain saw produced for professional lumberjacks may have less safety features than a model produced for consumer use in cutting firewood. If the consumer buys the professional model and is injured, he may now have a tort action. In the past, the doctrine of "assumption of risk" might have made such a suit impossible, but the courts now limit the applicability of this doctrine. A consumer desiring to purchase the professional model might be willing to waive his right to damages if he could do so.

This is the second major substantive point of the analysis. If they could do so, consumers might prefer to sign binding contracts limiting the total amount of compensation for even pecuniary losses in the event of an accident.

Moral Hazard This is a situation in which behavior is affected by the existence of insurance. For example, someone may not lock his car because he knows that if it is stolen the insurance company will compensate him for the loss. Insurance contracts are written to reduce moral hazard.

With respect to products liability, moral hazard arises primarily after an injury has occurred. It may occur with respect to medical costs. Medical costs are an important component of tort liability. Direct (first party) medical insurance makes use of several mechanisms to reduce moral hazard, and it is important to examine these mechanisms within a products liability context.

It may seem that an injured person with a given injury "needs" a certain amount of medical care, and that the amount is not under the control of the patient. This is incorrect. There are many ways in which consumers with similar injuries can use different amounts of medical care. The amount used will depend on the cost to the consumer himself. For example, consumers who must pay 20% of the cost of hospitalization may be more likely to use a semi-private room than a private room. As Priest indicates, it is also possible to use more or less full time nursing care for a given injury.

Two mechanisms which serve to reduce this problem with respect to first party insurance are coinsurance and deductibles. With coinsurance, the insured pays part of the costs of any medical care. That is, the insurance company may pay 80 percent of medical costs, but the insured will pay the rest. Such coinsurance gives patients some incentive to economize on medical care.

A deductible is a payment which the insured must make before coverage begins. A medical insurance policy may require that the insured pay the first \$200 per year of medical bills before the insurance begins to cover remaining costs. Again, this is a method of providing an incentive for the insured to economize on medical care.

Medical insurers also specify in some detail the amount they will pay for any particular condition. This limits spending. An extreme version is a "health maintenance organization," a situation in which the consumer contracts in a healthy state for medical care

from a provider who will pay costs but will also determine treatment. Again, this is a method of limiting the moral hazard associated with medical insurance.

Note that the consumer decides ex ante (before he is sick or injured) exactly what sort of medical care he will receive if he becomes sick or injured. Ex post, of course, the consumer would want the maximum amount of medical care because the consumer knows that he is injured and will benefit from care. However, the correct measure of value is the ex ante willingness to pay for insurance, at a time when the consumer is comparing expected costs and benefits and before he knows if he will be a beneficiary or not.

If tort damages allow full compensation for all medical care expenses, then the consumer will buy the maximum available. However, the proper amount (the amount the consumer would be willing to pay for in the price of the product) would correspond to the consumer's freely chosen level of medical insurance. Thus, for those consumers who have medical insurance, the proper solution is for their normal medical insurance (with all its limits and constraints, including any coinsurance or deductible) to govern, and for the injurer to reimburse the medical insurance company for its expenses. This would also imply subrogation (compensation of the injured's own insurance company for any costs) so that the injured could not collect twice for the same injury. Cooter and Sugarman (1988) also argue that the injured party's own health insurance is relevant in deciding on the level of compensation if

an injury occurs.

For consumers without insurance, some standard such as the level which Medicare or which a large private insurer would pay for a comparable injury would be appropriate. Indeed, defendants might prefer to hire some large private insurance company to monitor the payments to an injured plaintiff.

This is the third major substantive point of the analysis. If they could do so, consumers would prefer to sign binding contracts limiting their medical compensation to the amount covered by their private insurance, or, for uninsured consumers, to the amount which a large private insurer would pay for the injury.

A NOTE ON PUNITIVE DAMAGES

Punitive damages are payments above and beyond the amount desired for compensation, however that is computed. Thus, to the extent that this form of damages provides even more compensation than that provided for compensation (which is itself more than consumers would want), then consumers ex ante would not want to be able to sue for such payments. Of course, the purpose of punitive damages is not compensation, but rather deterrence. I will discuss this form of payments in Chapter 4. However, the fourth point is that: If they were able to do so, consumers would prefer to limit their ability to sue for punitive damages to truly "outrageous" cases, perhaps those where outright fraud was committed by the manufacturer.

SUMMARY

As of now, consumers cannot sign binding contracts to limit

damages in the event of an injury associated with a product or service, even though the consumer is in an ex ante contractual relationship with the injurer. Therefore, we cannot directly observe the contracts which the consumer would sign. However, theoretical analysis indicates that these contracts would have several identifiable features:

1. The contracts would call for no compensation for nonpecuniary damages (damages for items which cannot be replaced.) Thus, there would be no compensation for pain and suffering or for worry about potential risks. Compensation for death would be limited to the economic loss to survivors. Compensation for serious irreparable injury would be limited to medical expenses, as defined below, and lost earnings.

2. Even for pecuniary losses, the contracts would call for an upper bound, which might approximate the expected pecuniary loss for the lowest risk consumer of the product. This would at least partially control adverse selection with respect to product purchases.

3. For medical payments, the coverage would be equal to coverage which the consumer himself had purchased from his own medical insurance company. For an uninsured consumer, coverage would be equal to that which would be provided by an agency such as Medicare, or by a large private insurance company. This would reduce or eliminate moral hazard with respect to use of medical care.

4. Consumers would greatly limit their ability to seek

punitive damages.

In addition, consumers might choose to contract with respect to their own disability and health insurance. In both cases, they might want to contract for subrogation, compensation to their own insurance companies by the injurer. This is because in an injured state, money does not have increased marginal utility, and so consumers would not want to be paid twice for lost time or for medical expenses.¹⁶

Note that most of the reasoning in this chapter is based on theoretical analysis, not on empirical observation, since we do not see such contracts written. However, as indicated in Chapter 1 above, there is little cost if the analysis is wrong. If we allow free contract and if I am mistaken, then consumers will not choose the terms I have predicted.

On the other hand, if we allow free contract and consumers do choose such terms, then we should realize that this choice is due to rational behavior and is not a choice imposed by firms. Arguments based on the undesirability of "contracts of adhesion," "unconscionability," or "unequal bargaining power" are not needed to explain consumers' choices if they choose in ways consistent with the above analysis. Thus, the arguments in this chapter can provide a defense if consumers sign such contracts and later attempt to obtain payments for some of the damages excluded by contract.

¹⁶Priest, 1992, p. 258, indicates that subrogation is already common in both workman's compensation and first party health insurance.

CHAPTER 4: DAMAGES AS DETERRENCE

In addition to compensating those harmed, damages also serve a deterrence function. The goal of deterrence is to force decision makers to bear the costs of their actions. In this way, if a manufacturer does not take efficient precautions, then he must pay the costs of the injury. If the manufacturer is liable for these costs, then it is in his interest to take efficient precautions and avoid paying damages. "Efficient" precautions are those whose value to the potential victim is at least as great as their cost. Potential victims would be willing to pay a price for products which included the cost of efficient precautions, and it is desirable to penalize manufacturers who do not take this level of precautions.

Because first party insurance is generally available to compensate the injured, most economists believe that the major function of tort law and damage payments is deterrence. (This includes Landes and Posner, two of the strongest defenders within the economics profession of modern tort law.) In this view, the main reason that damages are paid to the party actually injured (instead of, for example, to the state) is to provide an incentive for the harmed individual to bring suit. (Payment of damages to the victim also provides a benefit by reducing the incentives of potential victims to take excessive precautions to avoid accidents.)

The deterrence justification for damages payments is to prevent situations in which consumers would have preferred to pay

the cost of actions to reduce risk but the actions were not taken. Hedonic damages (discussed in Chapter 5), the measure of lost enjoyment of life, which are based on a linear extrapolation from willingness to pay for a marginal reduction in risk, is the penalty needed to induce optimal precautions if the potential injurer would otherwise take no precautions at all (Spence, 1977; Shavell, 1987, Chap. 10). If the manufacturer faces other incentives to take precautions, however, the willingness to pay measure of damages is too large.

If consumers have perfect information about product risks, then there is no need for use of the tort system for deterrence at all. This is the mirror image of the situation in which only the tort system provides deterrence and full damages are optimal. While theoretical economic analysis is easier if an extreme assumption (only torts deter; or, there is complete information and so no need of torts) is made, in the real world neither extreme theoretical assumption is correct. Rather, consumers have some incomplete and sometimes erroneous information about risks, and torts are one imperfect instrument among many for deterrence. Indeed, one function of the tort system may be viewed as providing consumers direct information, as when consumers learn from news reports about product litigation. This information is imperfect, but it does exist and provides incentives for safety. For practical policy (as opposed to theoretical analysis) we cannot ignore this information and argue that only tort damages provide deterrence.

Because the market almost always provides significant precautionary incentives, often at the optimal level and sometimes beyond, it is incorrect to view the willingness to pay measure as the only source of deterrence. Damage payments are seldom if ever the only instrument used for deterrence. Indeed, the most widely used measures of willingness to pay for safety are values derived from wage differentials for risky jobs that would not exist were it not for market-based precautionary incentives, which imply that workers have good information about risk. This means that damage payments cannot be the only source of deterrence.

DIRECT SAFETY REGULATION

One impetus for safety in addition to tort law is direct safety regulation. Such regulation applies to many of the products at issue in litigation. Pharmaceuticals must be approved by the Food and Drug Administration (FDA) before sale, and evidence indicates that this agency is too restrictive, rather than too lenient, in approving drugs (Peltzman, 1973; Comanor, 1986). Therefore, it is highly unlikely that any approved drug (absent outright fraud in the approval process) is unsafe, and unlikely that tort liability associated with pharmaceuticals will lead to efficient increases in safety.

The Occupational Safety and Health Administration (OSHA) regulates workplace safety. The Consumer Product Safety Commission (CPSC) regulates many consumer products; the FDA and the Department of Agriculture regulate quality of foods; the National Highway and Traffic Safety Administration (NHTSA) regulates automobiles; the

Environmental Protection Agency (EPA) regulates environmental risks. Physicians cannot practice medicine unless they are licensed.

I am not claiming that the existence of these agencies is always enough so that tort law cannot ever lead to efficient improvements in safety, nor do I claim that this regulation is optimal. My point is much more modest. Since these forces additional to tort law obviously do exist, it is clearly improper to design deterrence mechanisms as if tort law were the only force for safety. There is no reason to assume that an additional incentive must always be constructed through large liability payments. In most situations, this additional incentive will lead to precautions greater than consumers wish to pay for. Even in those cases where a firm does in fact underinvest in safety, deterrence mechanisms other than the liability system come into action to penalize firms that spend too little on safety.

Because this is an essential point, I discuss it in some detail, first in the context of workplace, and then product safety.

WORKPLACE SAFETY

There is no reason to expect that in any systematic sense, too little is spent on safety in the workplace. Indeed, the very data used to calculate the willingness to pay (hedonic) values is based on an explicit assumption that wages vary with job risk. Most values are obtained from labor market analyses of wage differentials and job risks. Analysts observe small differences

in pay for jobs with small levels of associated risk.¹⁷ For example, a job with a .0001 (one-one hundredth of one percent) risk of death per year may pay a wage premium of \$150. This would lead to a hedonic value of \$1.5 million.

However, this method of derivation indicates that in general workers are paid ex ante (before any injury occurs) to bear on the job risks. This means that it is incorrect to use the values for compensation, at least for job related deaths. If workers are reasonably rational and aware of risks (as they must be, to generate the wage differentials in the first place), then they are compensated for bearing these risks through the wage payment for the job. This compensation, with no help from the liability system, provides an exactly correct incentive for employers to spend optimally on safety. If the willingness to pay figures have any meaning, they imply that in labor market situations there is no gain from paying ex post (after the accident) compensation in addition to the ex ante payment for risk bearing. If workers are not compensated for risk bearing through ex ante wage payments, the calculated hedonic values themselves are of course meaningless. In this case, there is no theoretical basis for using such values for ex post compensation; see Dickens, 1990, for an exposition of this view.¹⁸

¹⁷In the modern American economy, no jobs are associated with large risks of death.

¹⁸Ashford and Stone (1991, p. 386-7) argue both that the willingness to pay values are appropriate and that chemical workers are not paid enough ex ante to compensate for on the job risks. This is inconsistent: either workers are compensated for risks, or

Therefore, compensation in the form of hedonic damage payments after injury would amount to compensating workers twice for the same risk -- once ex ante through higher wage payments, and once ex post through damage payments. The effect of this double compensation would be harmful to workers. Faced with the prospect of double compensation -- which in many respects acts as a tax on employment -- employers would take too many precautions (from the viewpoint of workers) and hire too few workers.

It might appear that employers could reduce the wage paid to workers by the cost of the expected damage payment in the event of death. However, this is where the insurance issue, discussed in the last chapter, becomes relevant. A large payment to heirs, in addition to insurance voluntarily purchased by workers, in the event of death is not worth its ex ante actuarial cost to workers.¹⁹ Thus, such a payment is worth much less to workers than its expected cost to firms. It is in this sense that it acts as a tax on labor and leads to suboptimal employment. It is a payment by firms which creates little value to workers, and acts as a wedge, reducing employment below the optimum.

PRODUCT SAFETY

A similar analysis applies to products and product liability. Some studies of willingness to pay are based on behavior in product

the figures are meaningless.

¹⁹Since death on the job is only a small fraction of all deaths, workers would not rationally reduce their life insurance because of this possible payment. Work related deaths are only .5% of all deaths: National Safety Council, 1989, p. 2; 8.

markets, rather than labor markets (Miller, 1990, p. 27). So again, calculation of a willingness to pay for prevention measure assumes that appropriate precautions are already provided by market forces. The calculation assumes consumers are already compensated for bearing risk, in the sense of paying higher prices for goods that incorporate reduced risk. As with workplace safety, use of hedonic values for deterrence will lead to efficient precautions only if the market provides no other mechanisms for inducing such precautions. But the market does provide additional mechanisms, particularly in the case of contractual relationships between firms and consumers.

The simplest mechanism is reputation. Product related deaths are extremely costly to firms. Indeed, there is evidence that mere failure to take safety precautions, even independently of unfortunate outcomes, is enough to impose substantial costs on firms. Much of the evidence on safety comes from event studies of the effects of safety related incidents on the value of firms. These studies, based on modern theories of efficient capital markets, rely on examination of stock prices to determine the effects of various events on the value of firms. The findings indicate a substantial cost to firms from events involving harm to consumers, or even risks of harms. The stock market measures the loss in value of reputation to a firm from making or being accused of making an unsafe product.²⁰

²⁰The findings apply directly to firms large enough to have stock traded on organized exchanges, but there is no reason to expect that other firms would not suffer similar, if unmeasured,

Some studies have examined recalls related to safety (Peltzman and Jarrell, 1985; Rubin et al., 1988.) This literature finds that for products recalled by the FDA and for products recalled by the CPSC, there are substantial effects on the stock value of the firms involved, even though many of the involved risks are quite small. The cost to firms of the recalls appears to be significantly larger than any plausible measure of the likely direct cost of the recall or of the cost of associated liability. The necessary inference is that there is a large reputation cost to having a product recalled. This reputation cost is a measure of the reduced value consumers place on the products of the firm.²¹

Mitchell (1989) finds that product tampering has a significant effect on the stock prices of manufacturers involved, again indicating a cost in reputation to firms involved.²² This result applies even though there is no realistic method which firms could have used to prevent the tampering.

Perhaps of most direct relevance is the analysis by Viscusi and Hersch (1990) of product liability actions. They find that news stories reporting on product liability suits and on regulatory events lead to significant losses in firm stock value. Losses are greater when personal injury is involved. Again, the magnitude of

losses in reputation value.

²¹Peltzman and Jarrell found a similar effect for auto recalls, but Hoffer et al. (1988) indicate that this was erroneous.

²²There is also a literature finding that airline crashes lead to losses in value of associated firms (e.g., Mitchell and Maloney, 1989) but others dispute these findings (e.g., Borenstein and Zimmerman, 1988.)

losses is significant and indicates a large cost to firms of allegations involving product safety. Yet it is apparent that these large losses are imposed by public reaction to the existence of an injury, not by the prospect of losses in court.

Graham (1991) has also argued that reputation effects associated with product liability litigation are quite significant in inducing additional expenditures on safety in the motor vehicle industry. He concludes (p. 181-2):

Interestingly, our cases suggest that the indirect effects of liability -- operating through adverse publicity about a product's safety and a manufacturer's reputation-- is often the most significant contribution of liability to safety. The direct financial costs of liability are usually a relatively minor factor, at least from the perspective of large manufacturers.

Graham finds similar results in his statistical analysis: NHTSA regulation, proportion of vehicle miles on interstate highways, consumer income (a measure of demand for safety), and unemployment (a measure of the business cycle) were all significant in explaining reduced highway deaths, but liability (measured in several alternative ways) was not.²³

Since firms do suffer these large losses in value as a result of safety events, there is no reason to assume that the only sanction for production of unsafe products is that associated with the tort system. On the contrary, consumers apparently reduce their demand for products alleged or proven to be unsafe. This

²³Alcohol consumption and average recorded speed were significant in leading to increased fatalities. It should be noted that Crandall (1991) does not find Graham's analysis dispositive on the issue of the effect of liability on automobile safety.

provides substantial market incentives for firms to produce safe products, and reduces or eliminates the need for damage payments to provide safety incentives.

To the extent that tort litigation provides information to markets regarding safety of products, damage payments should be sufficiently large to make such litigation worthwhile for plaintiffs. However, any additional payment, such as for hedonic or other extraordinary damages, or large payments for pain and suffering, serves no efficiency purpose. Moreover, as indicated in the last chapter, there are additional large efficiency losses from such payments.

PUNITIVE DAMAGES

In recent years, consumers have been increasingly able to obtain punitive damages in product liability cases. Punitive damages traditionally have been available if the misconduct of the injurer was egregious. However, more recently, some believe that this form of damages has been too easily obtained. The only purpose of this form of damages is deterrence; by definition, punitive damages are above and beyond any damages needed for compensation. Since some forms of behavior might not be adequately deterred by the mechanisms discussed so far, there is some room for punitive damages. However, consumers would want to return to a standard of severe limitations for this form of damage. A reasonable standard might be that punitive damages would only be available if the underlying conduct rose to the level of criminal behavior.

SUMMARY

If tort law were the only force in society for safety, then large damage payments might be efficient. However, there are numerous other forces for safety. One is direct government regulation of safety. Virtually no product or service escapes such regulation, and the products likely to be involved in tort litigation are extensively regulated. Indeed, for an important class of products, pharmaceuticals, evidence indicates excessive regulation, so additional regulation imposed by tort law is clearly unneeded. Virtually all other products are also regulated in one way or another.

In addition, there is no reason to assume complete consumer ignorance of risks, which is the assumption required for hedonic damage payments to be efficient. The very data used to calculate hedonic payments assumes that wages reflect risk, so such payments are not needed for workplace safety, and would lead to excessive spending on safety and to not enough workers being hired, both measured from the perspective of workers themselves.

There is also evidence that consumers of products respond to safety events. Recalls and product liability litigation lead to large losses in the value of firms. These losses may be interpreted as responses to information about safety. This implies that an important function of tort law may be the provision of information about safety of products, but that damage payments need only be sufficiently large to provide an incentive for litigation.

In the previous chapter, I indicated the sorts of damage

payments which consumers would likely specify contractually if they were free to do so. Payments at this level would likely provide adequate incentives for information creating litigation without leading to excessive costs of products. They would thus serve to provide both adequate compensation and adequate incentives for safety. In the next chapter, we see that larger damage payments have substantial costs to consumers.

CHAPTER 5: EFFECTS OF LARGE DAMAGE PAYMENTS²⁴

The analysis in this book deals with nonpecuniary damages, such as damages payments for pain and suffering, or for "lost pleasure of life." The elements at issue in litigation regarding the level of payments for such damages are obviously not traded in any market; there is no explicit market price for an injury or for death. Thus, there is no obvious way in which juries can decide the proper dollar amount for such damages. This creates uncertainty about the likely outcome of a trial, and uncertainty is one factor making litigation more likely (Cooter and Rubinfeld, 1989.) One benefit of eliminating this form of damages is the reduced likelihood of litigation which would follow. (This is also the benefit of scheduling the payment of this type of damages, as discussed by Bovberg et al., 1989.)

There is a proposal for measuring such damages which is receiving some attention from the courts. This is the use of "hedonic" or "willingness to pay" damages.²⁵ This measure of damages is based on linear extrapolations of wage premiums demanded by workers to accept risky jobs. For example, if a job has a 1 in 1000 chance of death per year and pays \$2000 more per year than a comparable job without this risk, then the "value of life" associated with this job is \$2,000,000. Economists at regulatory

²⁴For a similar analysis, see Calfee and Rubin, 1992 and Rubin and Calfee, 1992.

²⁵This proposal is discussed in Bodine, 1992; Dickens, 1990; Havrilesky, 1990; Miller, 1989, 1990; Rubin, 1989; Rubin and Calfee, 1992; Smith, 1990; Viscusi, 1990.

agencies routinely use these values in making safety decisions.²⁶ However, even though it may be desirable to use such values for ex ante safety regulation, it is not desirable to use them for ex post compensation, for the reasons discussed at length in Chapter 3.

While tort law is currently inefficient, if this theory of damages is adopted by the courts, the degree of inefficiency will greatly increase. Henderson and Twerski (1991A, B) argue that tort rules have reached their logical extreme, and that strict liability without fault is not possible. However, even if rules do not change, it is possible that the law may become more inefficient as a result of increased damage payments. In particular, hedonic damages are receiving increased use in the courtroom. One use of such damages has recently been allowed by the Supreme Court.²⁷ If this theory becomes settled law, then damage payments will greatly increase, and the already observed harmful effects of tort law will be exacerbated. While Henderson and Twerski may be correct in arguing that legislatures will ultimately limit damage payments, nonetheless, if this theory is adopted there will be substantial costs during the period before such legislation can be passed. Moreover, Henderson and Twerski do not directly address this theory of damages.

If hedonic damages or other large payments for nonpecuniary losses such as pain and suffering simply failed to provide

²⁶I myself used these values when I was Chief Economist at the Consumer Product Safety Commission. See Rodgers and Rubin, 1989.

²⁷Molzof v. U.S., 90-838, 60 U.S.L.W. 4081 (January 14, 1992.)

efficient insurance and deterrence, that would be sufficient reason not to encourage systematic use of such damage payments. But hedonic damage payments also induce price distortions, which bring further costs. Indeed, current tort law has already introduced substantial distortions, and the new theory would only exacerbate this problem.

Product price serves two functions in the context of products liability and safety. One, the more general function, is simply to allocate resources. The other, more specific to the role of liability, is to provide a signal of the level of risk associated with using a product. The products liability system (particularly in the form of strict liability) has often been justified as making product price more useful for both these functions – at least when losses are pecuniary (e.g., Shavell, 1987). Imposition of damages for nonpecuniary losses, however, introduces distortions that render price under strict liability inefficient from the standpoint of both resource allocation and risk assessment.

PRICE AND RESOURCE ALLOCATION

The allocation problem arises from bundling of unwanted insurance with products. Product price must increase to cover the involuntary insurance premium, and given the administrative and other inefficiencies bound to inhere in insurance provided through tort liability, the cost of such a policy will substantially exceed its actuarial value. The policy is essentially worthless to buyers. Parents would be willing to pay essentially zero for a multi-million dollar life insurance policy on a child going off to

summer camp, and a worker would place a very low value on an additional multi-million dollar life insurance policy on his own life. Therefore, the premium for this involuntary insurance is more or a less a deadweight loss added to product price.

This cost increase will of course distort consumer choices. Risks associated with some activities (which I call "background risks") are not covered by the liability system, and so prices for these activities will not reflect any cost of unwanted insurance. For example, if a child playing at home is killed in a (non-product related) accident, there is no liability. If a child drowns at summer camp, the camp will likely be liable. Even if the odds of death at a summer camp are only one in 100,000, a \$5 million insurance policy would cost \$50 plus the cost of administrative inefficiencies. This could lead some parents to keep a child at home, even though camp may be no riskier, and perhaps even safer, than playing at home in the back yard. Where the odds of injury are greater, market effects can be striking, as in the familiar cases of light airplanes (Priest, 1992), municipal swimming pool diving boards, and football helmets.

Perhaps the clearest examples of price distortions occur in connection with products that, while risky, actually decrease the consumer's exposure to risk. Many products subject to potential tort liability serve to reduce risk. For example, medical care reduces risk, but is subject to malpractice liability. Before kidney dialysis, patients died from kidney failure but could not sue. Since this technology has become available, patients live

longer but there are many opportunities for suit. (Tancredi and Nelkin, p. 254.) Pharmaceuticals also generally reduce risks, but are associated with liability. Dungworth (1988) indicates that 13.5% of all product liability cases in his sample are pharmaceuticals. Priest (1992, p. 258) indicates that 60% of modern product liability judgments relate to workplace accidents, so pharmaceuticals would represent 34% ($13.5/.4$) of all "pure" consumer cases. Huber (1985) has argued persuasively that many products governed by the tort system are risk reducing.

Many of the more prominent large tort cases involve risk reducing products. Asbestos is a fire retardant, and many of the alleged injuries occurred during World War II, when asbestos was being installed in warships to increase their safety. Agent Orange was a defoliant used in Vietnam to eliminate hiding places which would have been used to attack the very soldiers who later alleged harm from the chemical. DES was used to prevent miscarriages, so that many of those harmed by the drug would not have been born without it. The Bjork-Shiley Convexo-Concave heart valve reduced danger from blood clots, but sometimes fractured. Pfizer, its manufacturer, has developed a newer valve which does not fracture and which it sells abroad but not in the U.S., partly because of a fear of liability (Tancredi and Nelkin, pp. 260-261.)

For products that reduce risk, the large damage payments associated with payments for nonpecuniary losses can actually lead to increased risk facing consumers. Again, this is because background risks (e.g., the risk of dying from a disease if there

is no medical or pharmaceutical intervention, of being shot by a Viet Cong, of being involuntary aborted and hence never born) are not associated with the costs of involuntary insurance.

For example, consider a hypothetical case of a vaccine that reduces the risk of a fatal illness that entails pecuniary losses \$10,000 and nonpecuniary losses of death valued at (to use a typical figure from Viscusi, 1990) \$5 million. Risk of injury without the vaccine is .0015, and risk when using the product is .0010 (a one-third reduction in risk). The average and marginal costs of producing the vaccine taking optimal care is \$10.²⁸

Under a regime of no liability (but with optimal precautions), the competitive price of the vaccine will be \$10. Under strict liability for monetary damages only, price is $\$10 + .001 (\$10,000) = \$10 + \$10 = \$20$, reflecting the .0010 probability of having to pay out \$10,000 if the product fails. The value to consumers of the prevention offered by the vaccine is the reduction in monetary losses (estimated as $.0005 \times \$10,000 = \5) plus the amount consumers would have paid for the marginal .0005 reduction in the probability of death ($.0005 \times \$5,000,000 = \2500), a total of \$2505. If consumer perceptions of relative risks are anywhere close to the truth, consumers will correctly choose to use the vaccine because its benefits of \$2505 greatly exceeds its costs of \$20.

²⁸I assume prevention expenditures are approximately at the optimal level, or at least at a level sufficient to make the product useful. One could argue that this is necessary for the vaccine to gain approval of physicians and the FDA.

Now add damages payments for hedonic losses. Price will increase by \$5,000, reflecting the .0010 chance of making a liability payment of \$5,000,000, for a total price of \$5,020. But consumer willingness to pay for the prevention offered by the vaccine is only \$2505. It seems unlikely that consumers would wish to pay anything close to the extra \$2515 for a "lottery" that awards \$5,000,000 in the event of death (the extreme reduction in marginal utility of wealth). Rather, informed consumers would choose not to use the vaccine and instead would live with the greater risk associated with no protection at all. Thus liability would tend to defeat even the preferences of informed consumers. At \$5,020, the vaccine costs more than its worth to consumers who are fully aware of the risk of not using the vaccine.

A situation much like the one outlined here may obtain in fact. Recent news reports (e.g., New York Times, Aug. 28, 1990, p. D2) on the drug Chlozaril, a powerful treatment for schizophrenia, indicate that approximately a .0002 probability of fatal side effects has led to extremely thorough field monitoring and a very high price of about \$9,000 per year. Both of these effects are apparently absent in European markets in which it is unlikely that fatal side effects will lead to large liability payments. There seem to be instances in which the drug is not used because of the price, and legislation has been introduced to permit Medicaid to purchase the drug without paying for the monitoring program. (This situation has recently been resolved as a result of pressure from FTC and others, so that a single provider is no

longer required for testing of drug users. Whether a similar resolution has been achieved regarding potential liability exposure for the manufacturer remains to be seen.)

In circumstances such as these, the risk reducing product must reduce risk by at least one half to be sold. Essentially, this is because the consumer must pay twice for the risk, once for the remaining risk itself, again for the (unwanted) insurance policy against pain and suffering. In the above example, if the vaccine reduced the risk by half, from .0015 to .00075, then the value to consumers of the product would be approximately \$3750 ($.00075 \times \$5,000,000$) and the cost would also be approximately \$3750. However, for products that reduce risk by less than this amount, even fully informed consumers who value the product at much more than its true cost of production can be discouraged from consumption.

When risk is greater than marginal — as with emergency services for the critically injured, for example — the effects of liability for hedonic damages can be even stronger. For example, a product that increases the probability of surviving from one percent to five percent (still leaving a 95% chance of death), could encounter pricing problems so severe as to price the emergency service out of the market, even if the provider has only a relatively small chance of actually being found liable.

There is another mechanism through which increased damage payments can increase risk. Firms may seek ways to avoid such damage payments. One way is to incorporate risky activities in

relatively small firms which have little to lose from bankruptcy. This is already occurring (Ringleb and Wiggins, 1990.) However, as damage payments become larger, this behavior can be increased. Henderson and Twerski (1991) indicate that as firms begin to assume that they will become bankrupt rather than pay damages in the event of tort litigation, then they will take reduced precautions, thus leading to further increased risk.

In sum, consumers generally do not wish to acquire insurance against nonpecuniary losses, including lost future pleasure of life and pain and suffering. If tort law awards such damages, then product price will increase to reflect the actuarial cost of this unwanted insurance. This will increase product price to the level that many consumers will choose not to purchase desired products. In the special case of risk reducing products, the effect can be to impose greater risk on consumers. This can also occur as firms plan on bankruptcy and therefore take reduced precautions against risk. In the next section, I present some actual examples.

SOME EXAMPLES

When a manufacturer of a relatively but not absolutely safe product is found liable for some injury which occurs with the product, then the price of this product relative to relatively safer alternatives will increase. This price increase, and any adverse publicity generated by the damage payment (as discussed in Chapter 4) will shift consumers to the use of more dangerous products.

In theory, the law recognizes this problem for some classes of products. Comment K of the Uniform Restatement of Torts,

Second, applies to "unavoidably unsafe products," as discussed in Henderson and Twerski, 1987. This has generally been applied to drugs. Even here, however, there has been excessive liability on drug manufacturers. For example, there is evidence that increased liability costs imposed on vaccine manufacturers have led to reduced vaccinations and increased risks. For many major vaccines, only one manufacturer now exists since other producers have exited the market, in part because of liability fears.

Lasagna (1991, pp. 341-345) discusses the effects of litigation on vaccines in detail, and also on "orphan" drugs. Tancredi and Nelkin (1991, p. 259) also discuss vaccines, and indicate that Genentech has ceased development of a potential AIDS vaccine because of a fear of malpractice liability. They also indicate that as of 1988, only one company was engaged in contraception research, although at least 13 companies had engaged in this research in the 1970s. Kitch (1985) also discusses vaccines.

The argument applies to any product which reduces without eliminating risk. There are many examples.

In *Campbell v. General Motors*²⁹, GM was found liable for a design defect in a bus. However, the death rate on transit buses is so low as to be virtually unmeasurable (National Safety Council, 1986, p. 77.) Increasing the costs of bus rides, as will occur from decisions placing liability on busses, will shift some riders

²⁹*Campbell v. General Motors Corp.*, 32 Cal. 3d 112, 649 P.2d, 184 Cal. Rptr., 891 (1982), reprinted in Henderson and Twerski, op. cit., p. 545.

from busses to cars and increase overall social risk; the extent of the increase depends on the price increase and the elasticity of demand.³⁰ A similar argument applies to airplanes. When a plane crashes, large damage payments are routine. We know that planes are 50 times safer than cars (on a per passenger mile basis; National Safety Council, 1986, p. 77) but there is no large compensation for most auto related deaths. These large damage payments for airplane accidents will raise airfares (not by much, since accidents are rare) and therefore shift some passengers from planes to cars. The predictable result is more deaths (as discussed in another context by Kazman, 1991.)

O'Brien v. Muskin,³¹ New Jersey, 1983 involved a diving accident in an above ground pool. The issue as litigated was feasible alternative designs. This case was notable for a new and inefficient standard of design defect. (Larsen, 1984.) However, another point is that Consumer Product Safety Commission data show that above ground pools are safer with respect to child drowning than in ground pools; increased liability for design defects in the former will increase at least some classes of risk. There have been recent cases of liability placed on manufacturers of disposable lighters. Lighters are safer than matches, so imposition of liability will again increase risk. (See Rubin,

³⁰Liability in this decision was found because there was no handle for a passenger on the first seat in the bus to grab. Washington, D.C., subways also lack such a handle; the decision does not seem to have led to major design changes.

³¹**O'Brien v. Muskin Corp.**, 94 N.J. 169, 463 A.2d 298 (1983), reprinted in Henderson and Twerski, op. cit., p. 551.

1987.)

Particularly tragic is the situation involving obstetrics and prenatal care. For many of the very poor, infant mortality rates are actually rising, and in general the rate of decrease has greatly slowed. There are many causes for this, but at least part of the problem is the unwillingness of many obstetricians to accept Medicaid patients, partly because of a fear of malpractice suits. (Nazario, 1988.) In the District of Columbia, 80% of all obstetricians have been sued. As a result many obstetricians are moving their practices to the suburbs around Washington, denying care particularly to the poor. (Epps, 1989.) Reiser (1991, pp. 240-241) indicates that as of 1987, 12.4% of U.S. OB-GYN physicians had given up obstetrics, and 27% had decreased high-risk care. In many states, family practitioners had ceased delivering babies, so that many mothers were required to drive long distances for care.

There are other ways in which inappropriate liability can increase risk. In a well known 1978 California case, *Barker v. Lull*,³² plaintiff was operating a "high lift loader" and fell, receiving serious injuries. From the facts it seems clear that the plaintiff, Barker, was unskilled in operating the equipment which caused the injury, and in fact the equipment was being operated in an area where a crane, a substitute machine, would have been more appropriate. The court found for Barker. The desirable solution (to reduce both costs of accidents and avoidance) would

³²*Barker v. Lull Engineering Co.*, 20 Cal. 3d 413, 573 P. 2d 443, 143 Cal. Rptr. 225 (1978), reprinted in Henderson and Twerski, op. cit., p. 531.

have been for Barker to take more care. That is, it is more efficient to have both cranes and high lift loaders available, with the former used in rough terrain. It is also efficient for inexperienced operators to refuse to operate a piece of equipment in dangerous terrain. (In fact, the normal operator did refuse to work on the day in question for just this reason.)

The economic theory of liability indicates that it is efficient for liability to be placed on the low cost avoider. Shifting liability to high cost avoiders will have perverse safety effects, in addition to the extra costs mentioned above. If workers believe that they will be compensated for injuries, they will be less likely to take care, where care consists in things like not operating machinery without training or in dangerous conditions. It may seem that the risk of physical injury is enough to offer adequate deterrence, but theory and data both show that money payments, such as expected liability payments, can increase risky behavior. The result is likely to be reduced safety.

Barker is notable also for a remarkable argument that seems to be dicta, but which the court relied on in shifting the burden of proof in a risk-utility balancing case from plaintiff to defendant:

The technological revolution has created a society that contains dangers to the individual never before contemplated. The individual must face the threat to life and limb not only from the car on the street or highway, but from a massive array of hazardous mechanisms and products. The radical change from a comparatively safe, largely agricultural, society to this industrial unsafe one has been reflected in the decisions that formerly tied liability to the fault of a tortfeasor but now are more concerned with the safety of the individual who suffers the loss... (Quoted in Henderson and Twerski, 1987, p. 540-541.)

This language was unanimously agreed to by six judges. This is remarkable in that the premises of the statement are factually incorrect. Agriculture is and has been among the most dangerous occupations. In 1985, agriculture was 30% more risky than construction, and 8 times as risky as manufacturing³³. Moreover, all data show that our "industrial unsafe" society is vastly safer than any previous society.³⁴ Thus, in *Barker*, the court imposed a new burden of proof based solely on an erroneous reading of the statistical or historical record.³⁵

Olson (1988) provides numerous plausible (though not empirically tested) examples of increasing risk from inappropriate liability. (Of course, claims that tort law reduces risk are not empirically tested either.) Some of these examples: reformulation of pharmaceuticals at lower but less effective dosages; seatbelts without slack which are safer but used less because less comfortable; purchase of smaller and more dangerous automobiles as

³³National Safety Council, *Accident Facts*, 1986, p. 23, indicates that annual death rates per 100,000 workers are 49 in agriculture, 37 in construction, and 6 in manufacturing.

³⁴Some examples: from 1930-1985, life expectancy at birth has gone from 60 to 75 years. Work accident deaths have gone from 15 to 5 per 100,000 population. Home accident death rates and death rates per 100,000,000 vehicle miles have also fallen radically. Data from *Accident Facts and Statistical Abstract*, cited in Rubin, 1987.

³⁵In general, people believe that the world has become more dangerous, even though all data (such as that in the previous note) show that it has become safer. 78% of the public believes that the world is more dangerous now than 20 years ago. Cited in Crouch and Wilson (1982, p. 3). Substantial decisions are based on such erroneous data.

a result of price increases³⁶; as new car prices increase, consumers keep older, less safe cars longer, and similarly for other products; unlicensed day care providers with no liability exposure replace safer day care centers; and in general more "do it yourself" activity as the cost of market activities increases.

Priest (1988 and elsewhere) has argued that there is no evidence that the explosion in tort litigation has caused increased safety. This is not surprising because the evidence as presented above is at least as consistent with a claim that tort law has led to reduced, not increased, safety.

PRICE AND RISK SIGNALLING

An entirely different problem is the relationship between product price and perceived risk. Strict liability for pecuniary losses tends to induce a price that reflects total costs of the product including risk (ignoring the usual inefficiencies in running an insurance program through the liability system). This is because the price of the product includes the expected cost of the pecuniary losses associated with the product, since manufacturers will be forced to pay consumers this amount under strict liability.

This relationship completely fails to hold when losses are nonpecuniary, or irreplaceable. There are several factors leading to the breakdown of the relationship between price and risk for nonpecuniary losses.

Consider first large probabilities of large losses. If the

³⁶Or, as Sam Kazman (1991) has stressed, because of CAFE gasoline economy standards.

injury is so severe that potential victims would be willing to pay substantial amounts to reduce risk, the damages payment extrapolated from willingness to pay for a marginal reduction in risk will be greater (perhaps much greater) than willingness to pay to eliminate the risk altogether. That is, a consumer might be willing to pay \$100,000 (perhaps his entire net worth) to reduce a risk of death from 51% to 50%. However, the consumer would not (because he could not) pay \$5,000,000 to reduce the risk to zero. Essentially, this is an income effect. It is in this sense that the extrapolated figures overstate willingness to pay to eliminate the risk. As a result, prices under strict liability will actually tend to overstate total costs including risk. As shown above, even fully informed consumers would make inefficient choices in the face of such prices.

If risks are marginal, then the price including expected hedonic damage payments will tend to reflect full social costs (in the sense of including a willingness to pay measure of the costs of risks involved in using the product). But great inefficiencies remain nonetheless. For one thing, prices and the associated bundled insurance will misallocate wealth from consumers with high marginal utility of income (those who have not been injured) to consumers with low marginal utility of wealth (victims). Parents with surviving children will be relatively poorer and parents who have lost children will be relatively wealthier. Clearly, this situation is inferior to one in which price is equal to cost of production and full risk information is available to consumers.

An even more fundamental problem arises when we consider how

consumers would use these risk-adjusted prices to distinguish among products of various degrees and kinds of risk. Compensation for pecuniary losses leaves consumers whole, so that in the limit victims are indifferent between the occurrence and the nonoccurrence of fully compensated accidents. This cannot be true of nonpecuniary losses. By its very nature, any level of compensation for severe nonpecuniary losses leaves consumers under-compensated. The buyer of a product involving nonpecuniary risk would therefore be willing to pay toward reducing that risk, even though all cost justified precautions have been taken. That is, the remaining risk represents a true loss in utility to the consumer even though there is no cost effective way of reducing this risk. This represents a latent cost of the product, over and above the monetary cost, and price cannot reflect this cost.

Buyers cannot use price as a full proxy for risk. (The same argument applies in the workplace context.) The price induced by hedonic damage payments would not support accurate utility comparisons among products that do or do not cause pain and suffering, or products that involve different kinds of suffering. In particular, consumers would not be alerted of the superiority of products that cause only pecuniary losses (which would be preferred because they can be efficiently insured against).

As an example, consider the choice between two home furnaces. Both are prone to failure with probability .01, but in different ways. One could destroy a home, at a purely monetary cost of \$100,000, while the other could cause an illness so severe the user would pay \$100,000 (almost his entire wealth) to prevent it. If

a failure occurred, the user of the first would be fully compensated by the \$100,000 insurance payment, but the user of the second would not. Therefore, consumers would prefer to purchase the first if they were aware of the nature of the risks. It is clear that price competition, even under strict liability, would not facilitate efficient choices by consumers. Both products would carry an implicit insurance premium of \$1,000 (.01 times \$100,000), but the risk-adjusted prices would provide no clue as to the difference between the two kinds of losses.

Thus the price induced by hedonic damages often has the paradoxical property of overstating social cost and understating the consumer's cost. The reason is the disparity between willingness to pay for prevention and willingness to pay for insurance. With such a disparity, insurance cannot be a perfect substitute (perhaps not even a good substitute) for risk information. When price includes the insurance premium induced by hedonic damage payments, the effect is not to accurately convey risk information. Rather, the effect is to dissuade efficient purchases by informed consumers, yet fail to dissuade inefficient purchases by uninformed consumers.

These price distortions arise with special force in the case of products that reduce risk. The distortions also can occur even when the products involved are not inherently risky in the first place. Some products, such as day care facilities or summer camps, may do no more than transfer an existing risk from self-insurance (because no purchased product or service is involved) to partial insurance through the tort system. If tort liability includes

hedonic damage payments, the effect can be, again, significantly distorted prices and, consequently, less efficient consumer decisions.

SUMMARY

Use of damage payments based on willingness to pay estimates for value of life would greatly increase the magnitude of tort damage payments for wrongful death. There is no theoretical justification for such an increase. Theory and evidence indicate that consumers do not desire the increased insurance against nonpecuniary losses associated with such large damage payments. There is no evidence that risk imposing behavior is currently underdeterred. Indeed, the very data used to calculate hedonic values implies that in workplace accidents, ex ante payments for risk are adequate to provide proper incentives. In product markets, substantial evidence indicates that markets impose a high cost for inflicting risk on consumers.

Since these payments are not needed for deterrence and not valued by consumers at their actuarial cost as insurance, the use of such damage measures would induce a large price distortion in the market place. This would be particularly troublesome for products which reduce risk; under plausible scenarios, informed consumers could be discouraged from buying products whose value is substantially greater than costs unless risk is reduced by at least fifty percent. This is because consumers are forced to pay for the unwanted insurance bundled with the product.

Some argue that prices which include damage payments can signal risk to consumers since the consumer must explicitly pay for

the risk. This justification is approximately correct for pecuniary damages. However, for nonpecuniary damages it fails. It is possible to fully compensate consumers for pecuniary losses, but it is not possible for nonpecuniary losses. Therefore, insured consumers would prefer a product which causes \$X in expected pecuniary losses over a product which causes \$X in expected nonpecuniary losses. However, price of the product cannot signal this difference; the bundled insurance premium for both types of risk would be the same. Therefore, price cannot provide the information regarding relative risk and types of risk which is sometimes thought to be an advantage of the tort system.

Thus, large payments for hedonic losses or for pain and suffering serve no useful function. They are not needed for deterrence. They provide unwanted insurance. They do not provide useful information regarding product risk.

CHAPTER 6: IS A CONTRACTUAL SOLUTION FEASIBLE?³⁷

Many believe that there is no possibility of a contractual solution to problems of excess liability. That is, many, including numerous attorneys, believe that the courts will not accept any contractual limitation on liability. As Havinghurst (1986, p. 144) in his discussion of obstacles to malpractice reform indicates, "Not the least of these obstacles is the natural conservatism of lawyers who, in counseling health care providers, tend immediately to discount the possibility that tort rights might effectively be altered by private agreement."

It is true that in several cases, the courts have invalidated contracts limiting liability for malpractice. (Two leading cases are *Tunkl v. Regents of the University of California*³⁸ and *Emory University v. Porubiansky*³⁹.) However, in these cases the contract was a complete exculpation for all liability and damages. As Ginsburg et al. (1986, p. 254) indicate, "The contracts provided no alternative means of assessing liability, imposed no burden on the provider in the event of negligence, and offered no other assurance to the patient against the adverse consequences of the provider's negligence." The contracts proposed here which eliminate damage payments for nonpecuniary losses differ in several

³⁷Much of this chapter is based on Havinghurst, 1986, and Ginsburg, et al., 1986. These analyses apply to medical malpractice, which is only one element of my proposal. However, many of the same legal arguments apply in a broader context. Moreover, as will be seen below, malpractice may be one of the easiest places to begin implementing the proposals suggested here.

³⁸60 Cal. 2d 92, 383 P. 2d 441, 32 Cal. Reporter (1963).

³⁹248 Ga. 391 S.E. 2d 903 (1981).

significant respects from the contracts disallowed by the courts.

These contracts do not exculpate providers of all blame. For example, they do not allow negligence. Indeed, the type of damage limitation I am proposing does not in any way attempt to change the legal standard for liability. Providers of goods and services would be tried under whatever legal standards applied to the relevant activity (strict liability, negligence, etc.) and the standard of proof would not be modified by contract.

Courts have in fact accepted contracts which limit liability of medical care providers. Colton v. New York Hospital⁴⁰ upheld a covenant not to sue in a case regarding an experimental medical procedure. In Schneider v. Revici⁴¹ the court upheld an express assumption of risk, even though the treatment used was admittedly unconventional (and ultimately ineffective.) These limitations of liability go to the issue of the standard of care, and therefore may be more problematic than contracts affecting only levels of damage payments.

Ginsburg et al. (1986, pp. 253-4) discuss in detail the rationales provided by the courts for failing to enforce contracts limiting malpractice. The contracts proposed here satisfy many of the critiques suggested by the courts. Moreover, I indicate specific ways in which the contracts can be implemented to further alleviate expressed concerns.

⁴⁰98 Misc. 2d 957, 414 N.Y.S.2d 866 (N.Y. Sup. Ct. 1979), cited in Mehlman, 1990, p. 409.

⁴¹817 F.2d 987, 989 (2d Cir. 1987), cited in Mehlman, 1990, p. 412.

DAMAGE LIMITING CONTRACTS CAN SATISFY MANY LEGAL CONCERNS

One concern cited has been that contractual relaxation of liability would adversely impact on the standard of care.⁴² The proposals here would specifically not impact levels or standards of care.

Additionally, injured parties would not be left with no remedies. On the contrary, it is anticipated that contracts would compensate injured persons for all (or almost all: see the discussion in Chapter 3) of their pecuniary losses. This means that there would be compensation for all lost earnings and for any medical expenses associated with the injury. This would eliminate one of the factors cited by Ginsburg et al.⁴³

Another class of elements in the legal challenge to contractual limitations is that such contracts reflect "unequal bargaining power" and that the contractual terms are not negotiated, so that there is no assurance that other health care

⁴²Ginsburg et al. (1986, p. 253-4) indicate that two relevant factors cited by the courts are:

- (c) Private agreements should not reduce a health care provider's statutory or ethical duties;
- (e) Health care providers should not be able to violate prevailing standards of care with impunity.

Contractual limits of liability to pecuniary losses would not violate either of these conditions.

⁴³ (i) The financial risk of personal injury should be borne by a negligent party when that party is in a much superior economic position to and capable of taking measures to prevent or insure against losses.

Again, the proposal here would explicitly not include contractual limitation of damage payments for financial (pecuniary) risk.

providers will not adopt similar contracts."⁴ While these factors do not carry much weight in economic analysis (e.g., Posner, 1986, pp. 102-104), they are apparently important in legal discourse. In order to have the courts accept the terms suggested here, it will be useful (and perhaps necessary) to alleviate any concern regarding unequal bargaining power, unconscionability, and contracts of adhesion.

In order to alleviate courts' concerns about such issues, it will be useful to first offer contracts limiting damages in contexts in which there is a real possibility of explicit choice. This will mean that initially the scope for contractual damage limitation will be relatively narrow. However, there are nonetheless benefits from this strategy. As seen below, such contracts may cover many important areas of product liability law.

Moreover, damage limiting contracts may spread from these narrow areas into more parts of the law. If courts observe consumers freely choosing damage limiting contracts in situations where courts believe that there is a true explicit choice, then they may begin to realize that there is a true benefit to consumers from such contracts. If courts uphold these contracts in some circumstances, there would be additional benefits. Assume that many consumers choose such contracts when offered an explicit choice. Then if other consumers in other contexts (say, involving the purchase of a product) were not offered an explicit choice in a contract or warranty which excluded nonpecuniary damages, the

⁴Ginsburg et al. 1986, p. 253-4, factors a, g and h.

fact that in a choice situation many did choose the exclusionary contracts would indicate that the others were not being coerced.

AREAS IN WHICH CONTRACTS COULD BE ADOPTED

I suggest that these contracts may be most easily adopted in three areas: medical malpractice, workplace injuries, and purchase of large durables such as automobiles, small aircraft and homes. I consider each. Small aircraft may actually be the most promising area in which to begin this reform.

Malpractice It might be relatively easy to adopt contractual damage limitations regarding medical malpractice. This reform could most easily occur through medical insurance contracts. These contracts would take the following form: A company would offer a health insurance plan with two options. Option A would allow litigation under current rules if there were unfavorable medical outcomes. Option B would be cheaper and would allow recovery only for pecuniary losses. The plans would carefully indicate the exact differences and terms. Thus, Option B would spell out carefully that in the event of some unfavorable outcome consumers could sue only for lost wages and for direct medical expenses needed to correct the injury, but that Option B costs \$X less than Option A. One source in the literature discuss the possibility of contractually specifying liability rules for the Federal Employees Health Benefits Program, essentially for the same reasons advocated here.⁴⁵ This Note also address issues relating to the implementation of such a program.

⁴⁵Note, (1986), "Customizing Liability..."

The plans could cover not only medical malpractice, but also liability of drug companies for nonpecuniary damages. The medical insurance company could negotiate a reduced price for pharmaceuticals by showing that consumers would have agreed ex ante not to sue for nonpecuniary damages in the event of a mishap. Many medical insurance plans already include payment for drugs (commonly with a co-payment of perhaps \$5.00), and it would be relatively easy to have Option B require a copayment of (say) \$5.00 and option A a copayment of a higher amount, based on the actuarial cost of the additional cost of nonpecuniary damages plus the additional expected expense of litigation induced by this larger but less certain payment.⁴⁶

This plan might be particularly workable since many consumers of health insurance are already able to choose between various plans, and this would be only an additional modification to that currently allowed choice. Thus, administratively, this would be a relatively easy plan to implement. Moreover, since courts apparently do not interfere with the terms of freely chosen health insurance plans, it might be particularly likely that they would not eliminate this choice either. Havinghurst (1986, p. 166) indicates that courts are already willing to accept contracts which

⁴⁶It would be important to have the premium be approximately equal to the actuarial value of the savings because this could be important evidence to the court that the choice was "fair" and truly reflected the cost to consumers of the insurance against nonpecuniary losses. However, the savings would include the reduced litigation costs and the reduced number of claims due to the increased certainty and reduced expected value of the claims.

require arbitration of medical malpractice claims.⁴⁷

Since each consumer would have explicit contracts to choose among, to the extent that legal dissatisfaction with contractual limits on liability are based on a theory regarding "contracts of adhesion", this plan would reduce or eliminate this problem because there would be explicit choice.

Workplace Injuries Injuries in the workplace would be a second area where contracting would be possible, although more complex than in the medical area. Under current workman's compensation laws, employers are not liable for injuries on the job, and so a direct contract with an employer would not serve any purpose. (The level of compensation under workman's compensation is approximately that suggested in this monograph in that only pecuniary damages are covered, and these are covered at a level aimed at reducing moral hazard problems, as discussed in Chapter 3. For a discussion, see Viscusi, 1991, Chapter 9.)

Even though employers are not liable at tort for on the job injuries, there is substantial litigation regarding such injuries. This is because producers of equipment used on the job are liable under product liability theories for workplace injuries. Priest (1992, p. 258) indicates that 60% of modern product liability judgements arise from workplace injuries, so this class of injuries are a significant part of the product liability issue.

Since employers are not directly involved in this litigation, the required contracts would be complex. At a minimum, there would

⁴⁷Madden v. Kaiser Foundation Hospitals, 17 Cal. 3d 699, 552 p.2d 1178, 131 Cal. Rptr. 882 (1976).

be different types of contracts for machinery and equipment purchased after and before the signing of the contract; it might not be possible to reach such agreements for already purchased items. For new materials, essentially, the contracts would take the form of employers offering workers increased wages if workers agreed not to sue manufacturers of workplace equipment for the nonpecuniary cost of injuries. Employers would recoup this wage premium by paying reduced prices for equipment; the price reductions would be financed by the reduced liability exposure of manufacturers.

For already purchased equipment, the process would require an extra step. Because of increased transactions costs, the arrangements might not be feasible; if they are feasible, they would probably apply only in cases where a workplace used a substantial amount of equipment produced by one (still solvent) manufacturer. The employer would then negotiate a deal between the manufacturer of the equipment and the workforce under which workers would give up rights to sue for nonpecuniary damages associated with the manufacturer's products in return for increased wages; the wage increase would be paid for by the manufacturer in the form of a side payment to the employer in return for the reduced liability.

In either case, the contract would best be negotiated by a union. During the negotiation process, the amount of the wage premium paid in return for forgoing rights to sue for nonpecuniary damages would need to be made explicit. If there is no union, then it would probably be best for employers to offer specific wage premiums to workers who would agree to forgo their rights to sue,

so that some workers might not elect the increased wages and reduced chance for litigation. (If my arguments are correct, most workers would presumably accept the terms.) If the employer unilaterally made the decision for all workers, the legal enforceability of the arrangement would be subject to some doubt. It would probably be best if the first contracts were contracts for new purchases of material and were signed with unionized workplaces.

Major Durables For certain major durables, prices are sufficiently high so that explicit negotiation over terms of the contract are feasible. For example, automobile buyers have an explicit option regarding extended warranties, which are sold separately from the automobile itself. Many new homes are sold with warranties (Weicher, 1984.) Of particular interest is the market for general aviation (non commercial airplanes) which has been virtually eliminated by product liability litigation (Priest, 1992.)

In all of these cases, a negotiated contract excluding pain and suffering damages would seem to be feasible. In all cases, the price of the product is sufficiently large and negotiations sufficiently complex so that it would be possible to include an additional contractual term dealing with payments for nonpecuniary damages in the event of mishap. For houses, the risk might be sufficiently low so that no such contract would be worthwhile, although builder liability associated with a housing development might be greater. For automobiles, the risks are greater, but also perhaps not sufficiently great to make such a contract worthwhile.

For general aviation aircraft the payoff could be quite substantial. Priest (1992, p. 259, 262) estimates that insurance costs associated with small aircraft are between \$75,000 and \$80,000 per plane. He also estimates that unwanted coverage associated with tort liability typically raises costs between 1.64 and 2.34 times the coverage desired by consumers.⁴⁸ This means that the price of such an aircraft could be lowered by between \$32,000 and \$49,000 simply by adopting the contractual standard proposed here. The magnitudes in this market are sufficiently great so that this might be the most promising arena in which to attempt contractual tort reform.

SUMMARY

Although the conventional wisdom is that courts will not enforce any contracts limiting liability for injuries, there is little legal basis for this belief. Courts have refused to enforce contracts which eliminated all liability, but there has never been a set of cases examining partial elimination of liability. Contracts eliminating damage payments for nonpecuniary losses would alleviate many of the concerns expressed by the courts. These contracts would not effect standards of care and they would not leave injured consumers uncompensated for injuries. Moreover, if they were carefully drafted and if consumers were offered specific choices, then the contracts could not be eliminated as being contracts of adhesion. Two particularly promising areas for writing such agreements are medical malpractice, where many

⁴⁸Priest, 1992, p. 245, Note 36, citing Priest, 1987, p. 1556.)

consumers already face a choice of contracts, and general aviation, where such contracts might reduce the cost of small airplanes by up to \$50,000.

The analysis in this book has argued that if consumers had the option, they would typically choose reduced prices and contracts eliminating their ability to sue for nonpecuniary damages. In this chapter I have argued that there is a good chance that courts would uphold such contracts if they were presented with the contracts and if drafters were careful in writing and implementing the contracts. I suggest that it is time to attempt such contracts, and that the result may be a substantial amount of tort reform with no need for legislation.

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