Retroactive Liability and the Insurability of Long-Tail Risks

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This article focuses on a specific aspect of liability insurance that arises out of the latent nature of certain insured events. In particular, it is concerned with the fact that in the interval between the original tort and the claim for damages the standard of care applied by the courts may change. This is the problem of retroactive liability. The article begins by briefly reviewing the legal background to the retrospective application of liability rules. Then it formally addresses the question of how retroactive liability can be reconciled with the goals of tort law and whether retroactive liability is insurable.

I. Introduction

In this article we are concerned with one specific aspect of liability for accidents, namely, the fact that in the interval between the original tort and the claim for damages the liability rule may change. The question then arises whether a new liability rule or simply a new standard of care can be applied to facts that took place perhaps some 20 years before, to the effect that someone is held liable today for an act or omission that would not have been considered wrongful then. This is the problem of retroactive liability. Hence, this raises the question of what the influence is of genuine uncertainty for the application of the traditional models of accident law and insurance.

The article begins by briefly reviewing the legal background to the retrospective application of liability rules. Then we shall formally address the question of how retroactive liability can be reconciled with the goals of tort law and whether retroactive
liability is insurable. This we examine both under loss occurrence as well as under claims-made liability insurance policies. A few concluding remarks shall be formulated.

II. Retroactive Liability in the Law

Introduction

Retroactive liability can be found both in legislation and in case law, especially in the areas of environmental liability and occupational health. It is sometimes explicitly imposed by the legislator. For example, the United Kingdom’s Environment Act 1995 instituted a strict retrospective liability for the remediation of contaminated sites [Jones (1995)]. Another well-known example is the heavily criticized American Superfund regime, instituted through Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which similarly instituted a retroactive liability regime [Revesz and Stewart (1995)]. The problem of a retroactive application of norms also arises where case law is developing new and more stringent standards of care for certain activities and these new norms are then applied to the existing situation. In such cases, the harmful event was not considered wrongful at the time when it took place, so that this case law in fact amounts to retroactivity. Bolt and Spier (1996) also showed that judges will often apply a new standard of care to old situations. For example, Dutch case law with respect to traffic liability also was applied retrospectively to cases that had their origin before the new case law. A final, interesting example concerns the Dutch case law with respect to employers liability for exposure to asbestos. In the well-known case of Cysouw/De Schelde, it was clear that the employee, Cysouw, had at some point during his services for the employer, De Schelde, been exposed to a fatal asbestos crystal, which years later caused the fatal disease asbestosis. However, initially it was considered that the harmful consequences of exposure to asbestos were unknown at the time and that therefore it was not wrongful for the employer to have failed to take precautionary measures to protect the employee. Subsequently, during a period when Cysouw was still employed by De Schelde, the effects of asbestos were known and yet the employer had not taken precautionary measures. Hence, it was crucial to find out whether Cysouw had inhaled the fatal crystal during the first period (in which case the employer would not have acted wrongfully) or in the second period (when there would be liability of the employer). The Dutch Supreme Court decided to shift this risk of uncertainty to the employer, who was obliged to prove that Cysouw did not receive the fatal crystal during the first period. It will obviously be hard, if not impossible, to deliver this proof.

Development Risks and Incentives to Prevent Accidents

Having briefly explored the treatment of retroactive liability in the courts, we continue with a normative analysis of the retroactivity issue from both efficiency and justice perspectives. By retroactivity we mean any source of change over time in the legal criteria used to establish liability, criteria that are then applied retrospectively to previous care decisions made by injurers. Hence, retroactivity under this definition could encompass an outright change in the liability regime (e.g., a shift from negligence to strict liability)

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1See generally on the retroactive effect of new case law Polak (1984), and see also the many examples of retroactivity in Dutch case law presented by Hartlief and Spier (1994) and by Bolt and Spier (1996).

2Dutch Supreme Court, 25 June 1993 Nederlandse jurisprudentie, (1993), 686; see also, with respect to this case and the problem of causal uncertainty, Faure (1993).
as well as a change in the standard of care applied by the courts, either because new technology has emerged or because new information about the harmful effects of existing technology has become available. For reasons of simplicity in what follows, we consider each of these possible cases together as a change in the legal standard of care. We start by considering whether holding someone liable today for an act or omission, which in the past (for whatever reason) was not considered wrongful (and would not then lead to liability), can be reconciled with the economic goals of tort law.

Efficiency Considerations. The efficiency analysis of injurers’ uncertainty about the (currently applicable) legal standard of care was initially explored by Craswell and Calfee (1986), and we adopt a similar approach here. Assume that an injurer is held liable for the damage caused if $c_t > c^*_t$, where $c_t$ is the observed level of care at the time of the accident and $c^*_t$ is the standard of care that is applied by the courts during that year. Providing that both $c_t$ and $c^*_t$ are known by injurers, and the cost of delivering $c^*_t$ is less than the expected damages, all cost-minimizing injurers would choose to avoid liability by delivering $c_t = c^*_t$. However, if injurers are uncertain in relation to the standard of care currently applied by the courts, the levels of care delivered ($c_t$) may depend on the degree of uncertainty. To see this, if $C$ is the combined costs of care and damage payments, the injurer’s expected cost-minimizing care decision can be written as:

$$
\text{Min}_{c_t} E(C|c_t) = kc_t + p(c_t)[1 - F(c_t)]D,
$$

where $k$ is the unit cost of care, $p(c_t)$ is the probability of an accident given $c_t$, and we assume that $p'(c_t) < 0$, $p''(c_t) > 0$. $D$ represents the average damages per claim (assumed to be invariant with respect to the injurer’s level of care), and the standard of care as currently interpreted by the courts is believed by the injurer to be distributed as $F(c^*_t)$. The first-order condition for privately optimal care will therefore be:

$$
p(c_t) F'(c_t) D - p'(c_t)[1 - F(c_t)]D = k.
$$

By comparison with the first-order condition for socially efficient care ($-p'(c_t)D = k$), it is apparent that injurers who are uncertain about the legal standard of care may be faced with either weaker or stronger incentives to take care. Of course, this uncertainty also may have an effect on the decision to engage in the activity at all, but for the purpose of this article we abstract from this possibility.

This analysis assumes that the standard of care taken into account by injurers is that which is currently applicable in the courts. However, if the technology of care were to change over time [i.e., if $p'(c_t)$ were to change], it follows that the socially efficient care level, $c^*_t$, would also change. If this resulted in a new legal standard of care applied to the injurer’s initial decision, we would have a situation of retroactive liability as defined above.

Without any information about the possible changes in care technology, injurers would presumably continue to make decisions over care in accordance with the above decision rule, and in that sense, retroactive liability would have no additional impact on the injurer’s care decision. However, we might expect that the existence of genuine uncertainty about the future standard of care would provide a private incentive for
injurers to invest in information services about care technology in a cost-justified manner [Hirshleifer and Riley (1992)]. This, of course, would be socially efficient, because care decisions would reflect better information about care technology. Shavell (1992) makes a similar argument in relation to the availability of information about the risk of an accident. He argues that the legal standard of care should take into account optimal investment in information about risk, rather than the information holding actually possessed by the injurer. Our argument implies that the legal standard of care also should take into account optimal investment in information about the technology of care, rather than the technology used by the injurer at the time of the injury.4

Justice and Compensation. Turning from efficiency to justice, one could of course argue that the compensation perspective of tort law is probably the main reason why retrospective liability is introduced in practice. Judges often are not interested in the long-term preventive effects of their rulings but rather have to deal with solving one particular case in which the demand to “do justice” to the particular victim is high. This demand for “Einzelfallgerechtigkeit” explains why the redistributive desire to compensate victims often is stronger than the perceived need for a preventive function for tort law [Spier (1997)]. In addition, retrospective liability is often an issue in environmental cases in which the first victim is usually the government. This may explain the tendency of legislators and judges to hold current operators to a high standard of care even for behavior that was committed, e.g., 20 years ago, and was not considered wrongful at the time. Moreover, when the victim is poor and the defendant supposedly wealthy, a deep-pocket argument obviously will play its role as well.

However, from the defendant’s perspective, retrospective liability can be criticized on distributional grounds. Indeed, in many cases, the operators who caused pollution in the past may be out of business now. It is, therefore, questionable whether it is fair to shift the costs of clean-up operations merely to the unlucky operators who can still be found in business today and whose behavior at the time was not considered wrongful. In sum, it may be unjust for the consequences of a collective failure in the past to be put on the shoulders of one particular tortfeasor who did not act wrongfully at the time.

Of course, many of these distributive concerns about retroactive liability (as well as the possibility of judgement-proof tortfeasors) would be overcome provided that operators were fully insured against liability claims. Defendants who were held liable for collective failures of the past would be covered by their contract with a liability insurer, and, as a consequence, plaintiffs would secure adequate compensation. In the following section we consider the possible obstacles to the availability of insurance against such long-tail risks when future liability is uncertain.

III. A Simple Model of Insurability

In this section, we intend to show the conditions under which insurance against long-tail risks will be obtainable at the same net premium irrespective of whether a claims-made policy or an occurrence policy is bought. We do this to establish a benchmark against which “insurability” can be measured in this context. We will then proceed to investigate the effect of imperfect insurer information about future liability rules on the availability of insurance. Following Kunreuther, we define an event as insurable if insurers can set

4Of course, it could be argued that this should require optimal investment information, given the cost of information services at the time of the decision (the development risk defense).
a premium that both reflects the risk and enables them to make a profit [Kunreuther (1997)]. If no market emerges at the premium set, the risk is said to be uninsurable. In principle, if the market for insurance is competitive, and if insurers can estimate the expected cost of the event, premiums will reflect the expected cost together with a loading to reflect administrative costs. Providing the latter is not too high, we would expect rational risk-averse individuals to buy some cover. In our context, insurability becomes an issue when additional loadings are applied to the premium to reflect insurers’ uncertainty about the timing and cost of future claims. Specifically, it is possible that insurers are both risk averse and ambiguity averse and, as a result, impose security loadings onto base premiums for long-tail risks. An insurability problem arises if demand is curtailed as a consequence of these loadings, to the possible extent that the market becomes unsustainable. In this section, we focus first on the determinants of supply and demand for liability insurance contracts where insurers are neither risk averse nor ambiguity averse.

In a market with many insurers and many injurers who potentially cause accidents to employees and the public, we begin by specifying for a given injurer the random variable \( n_t \), signifying the number of accidents during year \( t \) for which it may be held liable. We assume that \( n_t \) follows a Poisson distribution with mean \( \lambda(\hat{c}) \), reflecting the underlying technology of care.\(^7\) In the absence of any lag between accident and claim, the expected claim cost on a given annual policy for an insurer providing full cover against liability in year \( t \) will therefore be:

\[
E_i(\tilde{D}_t) = \lambda(\hat{c}_t)[1 - F_i(\hat{c}_t)]D_t, \tag{3}
\]

where the insurer knows the injurer’s level of care to be \( \hat{c}_t \), the privately optimal level of care,\(^8\) and the standard of care as currently interpreted by the courts is believed by the insurer to be distributed as \( F_i(c^*) \). Hence, an insurer offering annual liability cover at actuarially fair rates would set the annual premium to be \( E_i(\tilde{D}_t) \). Whether or not this contract will be purchased by a given injurer will depend on the latter’s perceived certainty equivalent of its prospective liabilities. Given a risk premium of \( r \), the injurer will purchase cover if

\[
E_i(\tilde{D}_t) + r = \lambda(\hat{c}_t)[1 - F_i(\hat{c}_t)]D_t + r \geq E_i(\tilde{D}_t), \tag{4}
\]

where \( F_i(c^*) \) is the injurer’s perceived distribution function for the court-determined standard of care. Clearly, the potential for relative optimism about the standard of care can result in some injurers, even with positive risk premiums, refusing to buy liability cover [Gollier (1997), p. 182].

If we now drop the assumption that accidents and claims occur simultaneously, the

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\(^5\)Insurers may be risk averse if, for example, there are transaction costs associated with insolvency [Mayers and Smith (1990)].

\(^6\)Insurers may be ambiguity averse if they are concerned about the uncertainty surrounding the estimates of the probability of loss [Kunreuther et al. (1993)].

\(^7\)The assumption of a Poisson distribution here implies that all injurers with a given care level will experience the same expected accident rate. Heterogeneity of injurers, other than through their care levels, is beyond the scope of this article.

\(^8\)That is, the solution to the first-order condition at equation (2). We assume that this is public information to avoid consideration of adverse selection and moral hazard issues, which are not the concern of this article. Clearly, if the insurer were unaware of the injurer’s level of care, the availability of cover would be curtailed, compounding the insurability problems discussed below.
insurer must draw up a contract in which the insured event is specified clearly with respect to the policy year, $t$. Although a range of possibilities exists, we focus here on the distinction between occurrence contracts and claims-made contracts. With occurrence contracts, the insurer agrees to meet the cost of all valid claims arising from accidents that occur during $t$, irrespective of when the claim is subsequently made.\footnote{In legal terms an act-committed contract is one in which the wrongful act must have taken place during the period of insurance cover. In a loss-occurrence contract the damage must have taken place within the period of insurance cover \cite{Visscher:1996}. For the purposes of this analysis, we regard both contracts as the same \cite{Faure:1998}.} Hence, under occurrence contracts future changes, resulting in the so called long-tail risk, are fully insured. With claims-made policies, the insurer agrees to meet the cost of all valid claims brought against the injurer within $t$, providing that they arise from accidents that occurred during a period of cover with the same insurer.

**Occurrence Contracts**

An insurer who offers an occurrence contract in year $t$ must set a premium to secure reserves against future claims from accidents that occur in year $t$. If $\theta_s$ represents the conditional probability that a claim arising from an accident in year $t$ is made in year $t + s$, then the unconditional probability of a claim in year $t + s$ is given by $\theta_s \exp(f_0 - \theta ds)$. The total expected claims cost arising from the policy given an observed care level of $c_t$ is therefore given by

\begin{equation}
E_i(D|c_t) = \lambda_s [1 - F_\theta(c_t)] \int_0^S \theta_s \exp \left( \int_0^s - \theta ds \right) ds.D,
\end{equation}

where the legal standard of care in all future years is believed by the insurer to remain distributed as it is in year $t$ \cite{i.e., F(a)}$, and the statute of limitations prohibits claims after $S$ years.

**Claims-Made Contracts**

An insurer who offers a claims-made contract in year $t$ at actuarially fair rates must set a premium to recover the expected costs of settling all claims arising in that year. If the insured has been with the insurer for many years, the total claims cost will include amounts attributable to several previous policy years. If $\rho_s$ represents the conditional probability that a claim arising from an accident in year $t - s$ is made in year $t$, then the unconditional probability of a claim in year $t$ arising from an accident in year $s$ is given by $\rho_s \exp(f_0 - \rho ds)$. Assuming that the accident rate $\lambda_t$ and the care level $c_t$ is believed to have been the same over previous years, the total expected claims cost arising from the claims made policy is therefore given by

\begin{equation}
E_i(D|c_t) = \lambda_s [1 - F_\rho(c_t)] \int_0^T \rho_s \exp \left( \int_0^s - \rho ds \right) ds.D,
\end{equation}

where $T$ is the number of years over which the injurer has been insured by the insurer.
It can easily be seen by comparison of the two expressions for expected claims costs that the conditions for premiums to be equal under occurrence and claims-made contracts is \( \theta_s = \rho_s \) for all \( s \), and also \( S = T \). The first of these conditions effectively implies that the source of information for predicting the delay between accident and claim is the same whether it is used to estimate current claims from historical accident data or future claims from current accident data. The second condition in practice requires that the claims-made policy is sufficiently mature to match the duration of the statute of limitations. The relationship between the two contracts can be illustrated for the special case when \( \theta_s = \rho_s = 0.1 \), \( D = £10,000 \), \( \lambda_s = e^{-0.1/s} \), and \( \delta_s \sim N(10, 5) \). Given these assumptions, and an assumed cost of care at £100 per unit of care, the privately optimal level of care would be 15.67. In Figures 1 and 2, we incorporate these parameters into equations (5) and (6) to graph the contributions made to the expected claims cost in year \( t \) from previous accident years (in the case of claims-made policies) and from future claim years (in the case of occurrence policies):

IV. Ambiguity

Figures 1 and 2 show that, providing insurers face the same perceived liability risk when looking forward as when looking backward, there would seem to be no reason for occurrence contracts to be withdrawn and replaced by claims-made contracts. In this section, we build on the framework established above to examine the impact of ambiguity faced by the insurer and the insured over the future legal standard of care when traditional occurrence cover is provided. We have established that the expected claims costs for a nonambiguous insurer arising from an occurrence policy in year \( t \) are given by equation (5) above. Crucially, the assumption made there was that the standard of care in all future years is believed by the insurer to remain distributed as it is in year \( t \) [i.e., \( F_{c_t}(c_t) \)]. However, as noted in Section II above, it is clear that the standard of care applied in the courts may change, reflecting changes in the technology of care. The problem of ambiguity arises when injurers faced with retroactive liability have no information about the future standard of care.

Consequently, although the insurer’s beliefs about the standard of care based on

\footnote{To simplify the comparison, we ignore differences in the way the claims costs are funded by the insurer.}
current practice may be captured by the distribution $F_u(c^s)$, the insurer will be far less
confident about these beliefs in relation to future claims than it is in relation to current
claims: That is, the insurer faces an ambiguous future. In circumstances where
decision-takers are faced with choices between ambiguous and nonambiguous beliefs,
there is evidence to suggest that they prefer the latter [Ellsberg (1961)]. There have
been several attempts in recent years to reconcile this phenomenon with an axiomatic
approach to decision-making under uncertainty [Fishburn (1983); Segal (1987); Gilboa
and Schmeidler (1989)]. However, for the purpose of this article, we can illustrate the
effect of ambiguity by reference to the behavioral model of Einhorn and Hogarth
(1985), in which decision-takers comparing expected values are assumed to adjust a
baseline probability estimate (or “anchor”) by an amount that reflects, first, the extent
of ambiguity (i.e., the range of different opinions over the probability of loss around the
baseline estimate), and second, the degree to which the decision-taker has a distaste for
potential probabilities of loss that are greater than the baseline (i.e., ambiguity aver-
sion). With a baseline estimate of $p$, the adjusted probability of loss in this model is given
by:

$$S(p) = p + \alpha[(1 - p) - p^b],$$

where $\alpha \in [0, 1]$ is the extent of ambiguity and $\beta > 0$ is the degree of ambiguity
aversion, which may vary between decision-takers. Incorporating ambiguity over the
probability of a claim in year $s$ into the insurer’s expected claim cost function for an
occurrence policy gives us:

$$E_i(\mathcal{D}|v_s) = \lambda(\bar{c}_s) \cdot \int_0^s \left[1 - F_u(\bar{c}_s) + \alpha[F_u(\bar{c}_s) - (1 - F_u(\bar{c}_s))^\beta]\right] \cdot \exp\left(\int_0^s - \theta \; dj\right) \, ds, \quad (8)$$

where $\alpha_s$ now represents the extent of ambiguity in year $s$: That is, we allow for the
plausible case in which expert opinion about the standard of care becomes more diverse
the further into the future the experts are asked to look. The parameter $\beta$, represents
the insurer’s degree of ambiguity aversion: the higher it is, the higher the weight the
insurer places on potential probabilities of claims in excess of $F_u(c^s)$ and, therefore, the

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The term “genuine uncertainty” is sometimes used to capture the same notion, reflecting the distinction between
risk—where objective evidence is available to support beliefs—and uncertainty—where there is not [Knight (1921)].
higher the premium charged for occurrence cover. The insurer again observes the injurer’s care level \( \bar{c} \), which is assumed to be the privately optimal care level, given ambiguity.\(^{12}\) We can use equation (8) to illustrate the impact of ambiguity on the expected contribution from future claim years as simulated above in Figure 2. Figure 3 shows both the original simulation and an additional one incorporating ambiguity. The extent of ambiguity faced by the insurer, \( \alpha \), is assumed to be 0.01 in the current year and to increase by 0.01 every subsequent year. The insurer’s degree of ambiguity aversion, \( \beta_i \), is assumed to be 1.5. All other parameters are assumed to remain as in Figure 2.

Finally, we can explore the impact of ambiguity on the demand for occurrence policies. Given a risk premium of \( r \), an injurer facing ambiguous long tail risks will purchase cover if

\[
E_i(D|\bar{c}_i) + r = \lambda(\bar{c}_i) \int_0^S \left[ 1 - F_i(\bar{c}_i) + \alpha \left[ F_i(\bar{c}_i) - (1 - F_i(\bar{c}_i))^{\beta_i} \right] \right] ds. \]

where the extent of the insured’s ambiguity is assumed to be the same as the insurer’s \( (\alpha_i) \), but the degree of ambiguity aversion \( (\beta_i) \) may differ. An insurability problem will arise if this condition does not hold. Clearly, this is most likely when the insurer is relatively pessimistic about the risk of a claim, and relatively more concerned about the ambiguity surrounding that risk. This is illustrated in Figures 4 and 5, in which equations (8) and (9) are used to construct the actuarially fair premium for an injurer with a given observed level of care, and the willingness to pay of that injurer for occurrence cover. We assume that care is measurable along a scale from 0 to 20 and that the level of care adopted by the insured injurer is known to be 13 units of care. We also assume that the injurer’s risk premium is £1000. All other parameters are as above. In Figure 4,

\(^{12}\)This will change from the optimal care level in the absence of ambiguity (\( \bar{c} \)) because of the assumed adjustment in the claim probability by the injurer before deciding on the care level. Although the direction of the effect could be either positive or negative, for values of \( \beta_i > 1 \) the optimal care level is more likely to increase.
we hold constant both the insurer’s and the insured’s degree of ambiguity aversion at 1.5, varying only the insured’s perception of the likely standard of care as applied by the courts. It is assumed that the insured’s subjective beliefs about the standard of care (defined in terms of the same scale as above) is normally distributed with mean $m$ and a variance equal to 5. The figure shows the relationship between the actuarially fair premium and the insured’s willingness to pay given different perceptions of $m$. Hence, it can be seen as representing the effect of the insured’s pessimism relative to that of the insurer (who is assumed to believe that the standard of care is normally distributed with a mean of 10 and variance of 5).

Figure 5 takes the same example but varies the insured injurer’s degree of ambiguity aversion ($\beta_c$), holding the perceived standard of care constant.

In both Figures 4 and 5, the simulated outcomes to the left of the intersections reveal the potential for an insurability problem arising from insurer pessimism and insurer ambiguity aversion, respectively. The extent of the problem would depend on the proportion of the insured population who are relatively optimistic by comparison with the insurer ($m < 7$), or who are relatively unconcerned about ambiguity compared with
the insurer ($\beta < 0.8$). If a substantial proportion of the population are in either of these categories, the market may not be sustainable, because the transaction costs may not be covered in a thin market.

V. Policy Implications

One practical result of the above is that an insurability problem would indeed arise under occurrence policies if the insured does not recognize the risk of a change in the legal standard and, therefore, is unwilling to pay the additional risk premium that the insurer requires for the additional risk he (pessimisticly) perceives. In such extreme circumstances, insurance in cases of retroactive liability can, therefore, only be obtained under claims-made coverage, because under this system the insurer does not need information on the probability of future changes in the standard of care. The disadvantage of claims-made coverage for the insured is obviously that it only covers claims for damages that have been received by the insurer during the period of insurance cover. Any coverage after that period is excluded.

For this reason, many legal systems have been rather critical of claims-made cover. Spanish case law has held claims-made cover void. In Belgium, the new insurance act of 25 June 1992 originally did not allow claims-made cover. However, in these two countries this rather rigorous point of view with respect to claims-made cover recently has been relaxed. A recent legislative change in Spain allows claims-made cover on the condition that the cover extends at least 1 year after the insurance contract expires. Moreover, the Belgian Insurance Act has been amended with respect to the problem of insurance cover over time. The starting point is still the loss occurrence system, but the act now provides for the possibility of allowing claims-made cover for certain types of liability insurance via royal decree. Again, the Belgian legislation prescribes that some long-tail risk must be covered: Cover should extend at least to claims made within 36 months after the insurance contract expires relating to damage that occurred during the period of cover or referring to circumstances that could give rise to a claim and that have been announced to the insurer during the period of the insurance cover.

In the Netherlands, recently the insurers association advised their members to move to a claims-made system of cover. The idea in the Netherlands is that the interests of the insured parties can be protected by mitigating the harshest consequences of claims-made cover. One possibility is to provide for an extension of the period of cover after the insurance contract has expired; another possibility is to stipulate that the insured party has the possibility of reporting circumstances or facts that may lead to a claim to the insurer during the period of insurance cover although no damage has occurred yet. Provided that these relevant circumstances or facts have been reported during the period of the insurance contract, cover will be awarded even if the damage only occurs after the insurance contract has expired [Wansink (1995), pp. 116–118]. This is also the system that is currently followed in the Belgian Insurance Act.

This brief overview of legislative and jurisprudential responses to claims-made cover shows that although claims-made cover may be the appropriate response of insurers to

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the long-tail risk, legislators and judges are often concerned more with the interests of the insured, which might be restricted under claims-made cover.

VI. Conclusion

This article has been concerned with the costs and benefits of making liability for accidents retroactive, given the availability of liability insurance. We have focused on the retroactivity issue in relation to the genuine uncertainty faced by injurers about the future standard of care in a negligence system. The traditional law and economics thinking on this issue has emphasized the effect of uncertainty over the standard of care on the privately optimal care levels chosen by injurers [Craswell and Calfee (1986)]. However, in this article we distinguish between the injurer’s perceived risk that the standard of care applied by the courts will differ from his chosen level of care, where this perceived risk is based on precedent or current practice, and the “genuine uncertainty” that the standard of care may change in the future as a result of unknown developments in the technology of care. Although the injurer’s probability distribution over liability may be the same in each of these cases, he may be far less confident about the reliability of the probability distribution as a guide to choice in the latter case.

Two implications emerge from this distinction. First, Shavell (1992) has shown that the existence of genuine uncertainty over the probability of an accident will provide superior incentives for injurers to collect information about risk, and we have reinforced this insight in relation to information about the technology of care. Second, to the extent that decision-takers have been shown to have a distaste for ambiguity, their choices over care may be changed further.17

In principle, the risk of liability arising from an unknown standard of care could be transferred to a liability insurer. However, in addition to the usual source of difficulty for insurance markets as a result of information asymmetry, it is also possible that insurers may have a distaste for ambiguity, and we have shown in this article that this could in some circumstances lead to market failure. These welfare losses from inefficient risk sharing as a consequence of retroactivity must, therefore, be set against the potential welfare gains from improved incentives for injurers to seek out information on care technology, as well as the concerns over distributive justice. Clearly, if the distributive and efficiency consequences of insurance market failure are excessive, the prospect of a second-best solution through a compulsory compensation fund or a cross-subsidising mutual risk-sharing agreement may emerge. Alternatively, some modification of the courts’ use of retroactivity might be considered, such as the use of the “prospective overruling” approach to liability, in which the courts announce that they will adopt the previous standard of care in a particular case but announce that from now on they will adopt a different standard in future as a consequence of new information relating to the technology of care. This would, in principle, reduce considerably the ambiguity faced by both injurers and insurers [Haazen (1993)].

16For instance, Katzman (1988) argues that claims-made policies are less risky for insurers than occurrence-based ones, because there is no commitment into the indefinite future.

17Normatively, however, it is not evident that these changes are inefficient, given that they reflect injurer’s preferences.
References


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