On the optimal negligence standard in tort law when one party is a long-run and the other a short-run player

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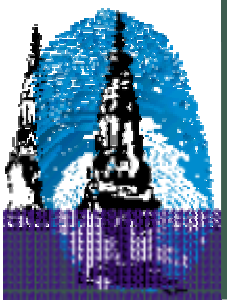

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Introduction

The following situation occurs often: a professional party and an amateur enter into a relationship and the amateur incurs a loss for which both parties are partly to blame. For example, a bank employee provides inadequate advice to a customer who invests imprudently and thereby incurs a loss that would have been averted if better advice had been given or if the customer had acted more prudently. For such situations it is well established that the negligence standards of the two parties must be set with a view to their respective abilities as professional and amateur; exercising care may be more within reach for the professional than for the amateur, and negligence standards should reflect this. This article introduces a further distinction between the two: To the extent that the professional is a long run player he or she will be more influenced by the incentives established by the legal system than the amateur, since the professional will have an *incentive to invest in acquiring the information concerning how the Court assigns liability*, while the amateur, if he or she is a one-time player, will be unlikely to invest in acquiring this information[1]. This article argues that the Court should then treat the amateur's behavior as exogenously fixed, and should set negligence standards with a view to affecting only the behavior of the professional party. This point will be shown to imply that:

1) the optimal negligence standard applied to the professional's conduct may then be either higher or lower compared to what is optimal when both parties can be relied on to become informed about the Court's verdict[2]. Important determinants of the optimal negligence standard will be whether amateurs will be likely to over- or underestimate the standards that will be applied to them and whether care by the professional and by the amateur are substitutes or complements.
2) whether amateurs over- or underestimate the standard applied to them, applying strict liability to the professional injurer will be optimal.

In the following, three real world cases will illustrate the kind of situation which the present analysis relates to. A model will then be used to derive the implications of the assumption that the amateur cannot be supposed to know the negligence standard set by the Court, and a

[1] Verkerke (3) discusses legal ignorance, its prevalence and how it affects existing legal doctrines and rules.

[2] This finding establishes one clear difference between the point made in this paper and that made by Ayres & Gertner (1) and by Verkerke (3) in their papers on penalty default rules (1). These papers argue that default rules should be set to the *disadvantage* of the informed party to induce the informed party to reveal information to the other party. While their point hence relates to the reveal information, the present analysis is mainly about tort cases where private information cannot be revealed between the parties prior to the ´accident´.

simplified numerical example will illustrate the forces at work in the model. Some qualifications to the analysis are then discussed on the background of the real world examples. A conclusion ends the article.

Examples

First example: Professional advice

In a case decided by the Danish Supreme Court (U.2000.577/2H), a group of `consumers´ (the legal term for what was referred to above as `amateurs´, i.e. people acting outside their profession and not on an ongoing basis) invested in projects that turned out to be a scam. The projects were suggested to them by a firm of brokers, who misled the group in various ways, e.g. by making them believe that insurance had been drawn covering losses. The broker firm went bankrupt when the real nature of the project and the absence of insurance were eventually discovered. As part of the project, a bank provided financing to the group of investors. The bank did not investigate the nature of the projects involved but simply provided the loans based on an assessment of the investors' personal finances. Furthermore, the bank did not mention to the group of investors that it had not investigated the projects.
In considering the relative degrees of negligence by the group of investors and by the bank, the Supreme Court remarked as follows:
´In marketing the projects, loans from the bank were a central part of the projects, and this the bank must have understood. The bank had to consider that *some investors* assumed that the bank, which offered loans to the project, had found the project to be trustworthy, and that such investors would borrow the money trusting this to be the case and without seeking other advice. On this background, … the bank ought to have informed the investors that it had not investigated the investment projects'.
However, the Court further reasoned:
`Investors who could not themselves judge the risk of participating ought to have sought professional advice or at least ought to have addressed the bank to make sure it had investigated the prospect´.

The Court decided to find the bank not liable on the basis of a balancing of the relative degrees of negligence. The question to be analyzed is whether this verdict ought to have been reversed on the theory that most ordinary citizens are uninformed about standards and therefore are not affected by the establishment of negligence in cases of this nature, while banks will be likely to note the outcome and adjust their routines accordingly (when doing so is worth the cost).

Second example: Insurance law

A standard issue in insurance law concerns negligence standards when the insured party (the consumer) provides information to the insurance company concerning the nature of risks involved, while the insurance company asks questions of a more or less specific nature. When some issue relevant to the size of the risk has not been taken into account by the insurance contract, the question arises whether the insurance company should be held responsible for not asking specifically about the given issue or whether the consumer should be held responsible for not bringing up the issue in response to a generally worded question such as whether there are any circumstances that increase the risk. In establishing the relative standards of negligence, it is well established that account should be taken of the fact that the insurance company is a professional party who can invest in acquiring appropriate skills and who may therefore take proper precautions, while at least some consumers may find it difficult to fill in questionnaires in a satisfactory way. Naturally, these differences in costs should affect negligence standards. The question raised in this article is how standards of negligence should

be set when they are much more likely to be known by the insurance companies than by the consumers[3].

Third example: General tort/contract law

The third example concerns a case on the boundary of contract and tort law, which has reached the media but not yet the Court. A small shopkeeper meant to deliver the earnings of the day (80.000 $) into her bankbox. The usual procedure was to deliver the earnings in a bag into a particular slot in the wall of the bank, but on that day, thieves had put up a sign indicating that the slot was out of order, and that money should be deposited in the bank's ordinary letter-box above the slot. The shop-keeper deposited the money and it was then lifted out of the letter-box by the thieves. It may be mentioned that the bank's letter box was not well protected from theft and that the special slot had been out of order before.
Supposing that there are precautions banks can take to prevent such losses (such as putting up a sign on the wall warning its customers never to deposit money anywhere else than in the slot), the question is whether the bank should be held liable on the grounds that banks in general may be more likely than shopkeepers to take note of a strict standard of negligence applied to them.

The Model

Consider a model of a professional (the injurer) and an amateur (the victim) who may both lower the probability of a loss l. The probability of the loss equals $p(a,b)$ where a is the precaution of the injurer and b is the precaution of the victim. The cost to the injurer is $c(a)$ while the cost to the victim of exercising precaution is $d(b)$. If we assume (as we will throughout) that first-order conditions are sufficient and necessary for an optimum, the negligence standards (a^*, b^*) that minimize total losses are given by:
$c_a(a^*) = -p_a(a^*, b^*)l$ and
$d_b(a^*) = -p_a(a^*, b^*)l$

These are the optimal standards when both parties are well informed about the situation (see e.g. Shavell, (2)). As is well-known, if both parties are well informed about these standards, they will have an incentive to abide by them, and optimality will be ensured. The question is whether the standard applied to the injurer should be altered when the victim cannot be relied upon to know the standard applied to him or her.
Consider first the case where the victim over-estimates the likelihood of having to carry own losses, i.e. thinks that the Court will be harsh on him or her. In this case, he or she is likely to choose some level of precaution b^1 greater than b^*. Then the standard that should be applied to the injurer, a^{1*}, assuming that the first-order condition yields the global minimum, solves:

$$c_a(a^{1*}) = -p_a(a^{1*}, b^1)l$$

from which it can be seen that if a and b are substitutes, i.e. if $-p_{ab}(a,b) < 0$, so that at a higher level of b, an increase in a induces less of a decrease in the probability of a loss, then $a^{1*} < a^*$. If the standard for the victim will continue to be set at b^*, the injurer will choose as his or her level of care the now optimal level a^{1*}. The idea behind requiring a lower standard of care by the injurer is that when the victim takes more than the optimal degree of care, there is less reason to demand care by the injurer.

[3] although insurance companies attempt to provide this information to consumers.

Conversely, if a and b are complements, the negligence standard applied to the injurer should be stricter when the victim believes to be treated more harshly than is in fact the case. In this case, if the standard applied to the victim remains b^*, the injurer will choose the higher level as the level of care[4].
On the other hand, if the victim believes that he or she will be treated more leniently than is in fact the case, results are turned around: if a and b are substitutes (complements), the negligence standard applied to the injurer should then be stricter (more lenient) than if the victim can be assumed to invest in information concerning the standards applied by the Court. One complication is worth mentioning: In the case of substitutes, it may not be optimal for the injurer to live up to the higher standard if the standard applied to the victim will be maintained at b^*, since the loss will be shared by the parties (under the rule of comparative negligence) and if a high fraction is born by the victim it may conceivably be optimal for the injurer to act with less than the higher level of due care, despite the discontinuity of his or her loss at that point. However, should this problem exist, a simple solution would be to lower the standard of care applied to the victim to the level b^1 in order to induce the injurer to exercise due care. Hence, this complication is not worth further attention.

The intuition behind the result that it is optimal in the case of substitutes to demand more care by the knowledgeable party when the victim cannot be relied on to take due care is clear: care by the injurer will then prevent more instances of harm from occurring.

Note finally that the rule of strict liability will be optimal when victims are unaffected by the rulings of the Court. When victims' actions are exogenous, equal to $\tilde{b}$, the injurer will under strict liability minimize $p(a,\tilde{b})l + c(a)$, which induces the socially optimal level of care, given the level of care exercised by the victim, whether that level is too high or too low (as long as the injurer knows the actual level of care exercised by the victim). Hence, strict liability is optimal not only for unilateral care situations but also when the victim does act but does not acquire information concerning the standard or the kind of rule applied by the Court.

An illustration

The basic principle may be illustrated in the case where efforts by the injurer and the victim are substitutes and where some fraction of victims is optimistic while others are pessimistic about outcomes for them. Consider the following situation: the professional (the injurer) can take two acts 0 or 1 and so can the amateur (the victim). Both can eliminate the loss of one unit by undertaking the more costly act 1.
Let the pay-off matrix be as follows:

Injurer\victim	Act 0 at cost 0	Act 1 at cost ½	
Act 0 at cost 0	Loss = 1	Loss =0	
Act 1 at cost ¾	Loss = 0	Loss = 0	

It is less costly for the victim to take precautions so the optimal outcome is for the victim to take precautions and for the injurer not to. This may be accomplished by setting the standard of due care for the injurer below the act 1 (i.e. to not consider act 0 on the part of the injurer

[4] Again on the sufficient but not necessary assumption that the first-order condition yields the global minimum of total cost given b; the condition is not necessary as the discontinuity of the injurer's loss-curve under the negligence rule will tend to make it optimal for the injurer to act with due care even if the level of due care is raised to a higher level.

as negligence). Whether the rule is comparative or contributory negligence, one achieves the optimal result: the victim will take care while the injurer will not.
However, if the victim does not know the negligence standard imposed by the Court, the equilibrium just mentioned may not materialize. If we assume that some fraction α of victims believes that they will have to cover their own losses if they act imprudently (i.e. take act 0), while the fraction $1-\alpha$ believes that the injurer will be liable in that case, and if we assume that this fraction is unaffected by how the Court assigns liability, it may be optimal to require the injurer to take act 1. If the fraction α of victims acts with caution and the fraction $1-\alpha$ does not, the total expected costs when the injurer chooses act 1 is ¾, while the total expected cost is $1-\alpha$, when the injurer chooses act 0. Thus, the optimal rule is to assign liability to the injurer when α <1/4[5]. Thus, if a sufficient fraction of victims will not take care, and the legal rule will not affect their conduct, it becomes optimal to require act 1 of the injurer. This is an instance of the principle mentioned above that if victims believe they will be treated leniently, and a and b are substitutes, the negligence standard applied to the injurer should be stricter than if victims have the incentive to become informed. However, it should be noted that it is optimal to require a higher standard of care by the injurer only if a sufficiently high fraction of victims can be expected to act without due care in the absence of information concerning what the Court will consider due care.

Discussion

Some qualifications to the general argument of this article are worth mentioning.
First, it may be claimed that litigation costs (or conflict resolution costs more generally) should be included in the analysis. However, it is not clear how this would affect results. If one assumes that victims will become informed after the occurrence of an accident about the standard applied by the Court (as the victims contacts a lawyer), a stricter negligence standard (or strict liability) will create a larger pool of valid claims and hence conceivably also a larger set of claims over which there will be divergent opinions and conflict. On the other hand, if the injurer will avoid losses through greater care, fewer losses will be incurred, and fewer conflicts will arise. This is a well-known trade-off which leaves the issue of whether changing the standard imposed on the injurer increases conflict resolution costs as an empirical question.

Second, it is clear that one should not underestimate the incentive for private parties to acquire information concerning negligence standards, and for information to reach people who have an interest in acquiring that information. Information spreads easily through mass media and the internet, and amateurs or consumers may become informed by more knowledgeable parties (such as lawyers, bank personnel, accountants or other advisors). And each verdict may well reach the attention of a certain number of people and thereby contribute to the general impression people have of the standards which the legal system imposes on them as amateurs or consumers. These factors may in certain cases modify the present analysis.

Third, it should be noted that Courts may affect the incentive for the parties to become informed[6]. Thus, in the case of the fraudulent projects, it makes sense for the Court to insist that the amateurs acted negligently by not asking for professional advice; if the Court can

[5] If the injurer can observe the precaution actually taken by the victim, the injurer should of course choose the high level of precaution when but only when the victim does not exercise care. In this case, the optimal standard applied to the injurer will depend on the behaviour of the victim (if it can be observed by the Court).
[6] Although the incentive to become informed about a standard is not directly related to its strictness; naturally, the incentive is related to the value of correcting a mistaken belief in either direction.

make clear that this is required of non-professionals[7], this requirement may spread through various channels, e.g. through bank personnel providing advice on personal finances, and if amateurs become aware of this requirement, the system may thereby be brought to work as hypothesized by the bench-mark economic models of accident law. In other words, if amateurs can be induced to seek professional advice, standards of negligence can hereby become known to them, and the Court can then set standards optimally. In the given case, the Court attempted to send two signals: to the bank that it may be found negligent in similar cases (if the victims had acted less negligently) and to future amateur investors that not seeking professional advice is an act of negligence. It is essentially an empirical question whether the Court should have sent a stronger signal to banks or whether it was correct to attempt to influence the incentive to seek advice. But the present analysis suggests that shared liability might have been the optimal verdict: imposing liability on the bank would have been rather certain to be noted by banks, while the signal to amateurs that they must seek professional advice seems less certain to reach (a majority of) future amateur investors. For this reason, since ignorant investors who do not seek professional help are likely to continue to exist, and since the cost for the bank of warning them in some way seems rather small, it might well have been advisable for the court to share the losses more equally between the two parties.

Conclusion

Liability in a tort or contract case is often established on the basis of an ex-post evaluation of the blameworthiness of the acts of the two parties. As is well-known, the law and economics approach differs by its ex-ante approach: it establishes liability on the basis of how the verdict or the standards expressed by the verdict will affect future behavior. Often, but not always, the two approaches will lead to the same result. One instance where the two approaches may differ arises when it is only optimal for the professional party to become informed about the verdict and the standards expressed by it. In this instance, only the behavior of the professional will be affected by the verdict, and the Court should set standards with a view to affecting the behavior of the professional in an optimal manner, taking as given the behavior of the amateur.

The following results were derived concerning the optimal way for the Court of doing so: If the (rationally) ignorant amateur takes less care than optimal and the precautionary measures taken by the two parties are substitutes, it will be optimal to require more than the socially optimal level of care by the professional party (which may be more than appears reasonable). On the other hand, if care levels are complements as it may by when the parties need to cooperate, and the level of care by the amateur is below the socially optimal level, it is optimal to also require a lower than first-best level of precaution by the professional. Moreover, whether the ignorant party over- or under-estimates the standards imposed by the Court, imposing strict liability on the knowledgeable party will induce the best obtainable level of precaution; this solution takes advantage of the fact that the injurer is likely to know the behavior of victims better than the Court.

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[7] It seems reasonable to assume that the particular requirement that amateurs must seek professional advice will more often come to their knowledge than complex standards of negligence set by the Court.

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