COMMENTS ON PAPER BY MARCEL BOYER AND DONATELLA PORRINI

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The topic addressed by Boyer and Porrini is a highly important one for the economics of accident law. It deals with the central issue whether we should use tort law and/or regulation to control externalities and if the conclusion would be that the use of both instruments should be combined, the question arises how such a combination should work.

A. CRITERIA FOR SAFETY REGULATION

The arguments in favor of safety regulation to control environmental risks are well known. The choice between regulation and liability rules has been thoroughly examined by Steven Shavell in 1984, in a paper in which he advances several criteria that influenced the choice between safety regulation and liability rules.  

1. Information Asymmetry as a Criterion for Regulatory Intervention

Information deficiencies have often been advanced as a cause of market failure and as the justification for government intervention through regulation. Also, for the proper operation of a liability system, information on, e.g. the existing legal rules, the accident risk, and efficient measures to prevent accidents, is a precondition for an efficient deterrence. According to Shavell, the parties in an accident setting generally have much better information on the accident risk.
than that possessed by the regulatory body. The parties themselves have, in principle, the best information on the costs and benefits of the activity that they undertake and of the optimal way to prevent accidents. This “assumption of information” will, however, be reversed if it becomes clear that some risks are not readily appreciated by the parties in an accident setting. Therefore, for every activity the question that will have to be asked is whether either the government or the parties involved can acquire the information at the least cost.

2. Insolvency Risk

If the potential damages can be so high that they will exceed the wealth of the individual injurer, liability rules will not provide optimal incentives. The reason is that the costs of care are directly related to the magnitude of the expected damages. If the expected damages are much greater than the individual wealth of the injurer, the injurer will only consider the accident as having a magnitude equal to his wealth. He will take, therefore, only the care necessary to avoid an accident equal to his wealth, which can be lower than the care required to avoid the total accident risk. This is a simple application of the principle that the deterrent effect of tort liability only works if the injurer has assets to pay for the damages he causes. If an injurer is protected against such liability, a problem of underdeterrence arises.

Safety regulation can overcome this problem of underdeterrence caused by insolvency. In that case the efficient care will be determined ex ante by regulation and will be effected by enforcement instruments which induce the potential injurer to comply with the regulatory standard, irrespective of his wealth.

In that case a problem might arise if the regulation was also enforced by means of monetary sanctions. Again, if these were to exceed the injurer’s wealth, the insolvency problem would remain. Hence, if a safety regulation is introduced because of a potential insolvency problem, the regulation itself should be enforced by non-monetary sanctions.

3. The Threat of a Liability Suit

Some activities can cause considerable damage, but even so a law suit to recover these damages may be never brought. If this were to be the case, there would of course be no deterrent effect of liability rules. Therefore, the absence of a liability suit would again be an argument to enforce the duty of efficient care by means of safety regulations rather than through liability rules. There can be a number of reasons why a law suit is not brought, even though considerable damages have been caused.
Sometimes an injurer can escape liability because the harm is thinly spread among a number of victims. As a consequence, the damage incurred by every individual victim is so small that he has no incentive to bring a suit. In particular, this problem will arise if the damage is not caused to an individual but to a common property, such as, e.g. the surface waters in which each member of the population has a minor interest. In addition, a long time might have elapsed before the damage becomes apparent; in this case much of the necessary evidence may be either lost or not obtained. Another problem is that if the damage only manifests itself years after the activity, the injurer might have gone out of business.

A related problem is that it is often hard to prove that a causal link exists between an activity and a type of damage. The burden of proof of a causal relationship becomes more difficult with the increasing passage of time since the damaging incident took place. Often a victim will not recognize that the harm had been caused by a tort, but might think that his particular ailment, e.g. cancer, had a “natural cause”, associated with a general ill health. For all these reasons a liability suit might not be brought and hence safety regulation is necessary to ensure that the potential polluter takes efficient care.

4. Administrative Costs

When examining the pro’s and contra’s of liability versus regulation, the administrative costs of both systems should also be compared. Liability rules are clearly costly in terms of time for both parties and in court fees. A part of these costs is borne by the whole community, such as, e.g. the cost of the legal system, fees for the judges, etc. Regulation produces costs for the community, including the costs of making the regulation, setting the standards, passing the statutes, etc. and of subsequent enforcement.

In this respect the liability system seems to have an advantage: the administrative costs of the court system are only incurred if an accident has actually happened. The main advantage of the tort system is that a lot of accidents will be prevented by the deterrent effect of being held liable and having to pay damages to the victim. In case of safety regulation, the costs of passing the regulation and of enforcing it are always there, whether there are accidents or not.

B. THE NEED TO REGULATE ENVIRONMENTAL POLLUTION

After having discussed the public interest criteria for regulation let us now look how these criteria relate to environmental pollution. If one takes the criteria for
safety regulation and applies them to the potential risk caused by environmental pollution, there is no doubt that liability rules alone are not sufficient.

If one looks at the first criterion, that of information costs, it must be stressed that an assessment of the risks of a certain activity often requires expert knowledge and judgement. Small organizations might lack the incentive or resources to invest in research to find out what the optimal care level would be. Also, there would be little incentive to carry out intensive research if the results were automatically available to competitors in the market: this is the well-known "free rider" problem. This problem can partially be countered by legal instruments granting an intellectual property to the results of the research. However, the problem remains that it may not be possible for small companies to undertake studies on the optimal technology for preventing environmental damage. Therefore, it is often more efficient to allow the government itself to do the research on the optimal technology (e.g. in a governmental environmental research institute). The results of this research can then be passed on to the parties in the market through the regulation.

Also, the insolvency argument points in the direction of regulation. Pollution can be caused by individuals or firms with assets which are generally lower than the damages they can cause by the pollution. In this respect it should not be forgotten that even a small firm can cause harm to a large number of individuals or to entire ecosystems. The amount of damages caused by this emission can of course largely exceed his individual assets. Moreover, most firms have been incorporated as a legal entity and therefore benefit from limited liability. Hence, the individual shareholders are not liable to the extent of their personal assets, but a creditor of the firm can only lay claim to part on all of the total assets purchased in the firm by the shareholders.

Also the chances of a liability suit being brought for damage caused by wrongful pollution is naturally very low. The damage is often spread over a large number of people, who will have difficulties to organize themselves to bring a law suit. In addition, the damage could only become apparent some years after the emission took place. This will bring proof of causation and latency problems, which will only make it difficult for a lawsuit to be brought against the polluter.

For these reasons it is clear that some form of government regulation of environmental pollution is necessary.

C. SAFETY REGULATION IN PRACTICE

When Shavell's criteria for safety regulation are applied to the environmental risk, one can easily note that there is a strong argument to make that the
efficient care to be taken to avoid environmental damage should also be fixed ex ante by regulation.

In many cases this regulation consists of licenses or permits in which an administrative authority fixes an emission standard which must be followed by the potential polluter. These licenses play a crucial role in environmental policy in most countries. An improvement of environmental quality will mostly be reached by imposing more stringent emission standards in administrative licenses. Hence, the general requirement that emissions are controlled through licenses and that the quality and quantity of the emissions are regulated by the conditions in this license, is a cornerstone of environmental law. Since these licenses are administrative acts, in most legal systems environmental law is considered to be a part of administrative law. Criminal law usually only comes into the picture to sanction a violation of administrative regulations or emission standards in the licenses.

Although environmental pollution is in the first place controlled through these administrative licenses, in individual cases there can still be damage to the environment. Then again liability under tort law comes into the picture and the question is raised of the influence of regulation on the liability system and vice versa. These complementarities between tort law and regulation shall be discussed below.

Finally we can point at literature that generally examined the effectiveness of safety regulation in controlling environmental harm. Dewees demonstrated that in North America the quality of the environment has improved substantially as a result of regulatory efforts, not so much in response to legal action in tort.

This empirical evidence of the success of regulation, compared to tort law, has also been stressed in the recent book of Dewees/Duff/Trebilcock. They hold that the large regulatory effort to improve the environment has met with considerable success when measured by the reduction of emissions, but that it is more difficult to argue that the environmental regulations of the 1970s in the U.S. equally had a considerable influence on the ambient environmental quality. Moreover, they also stress that while environmental regulation is a determining factor in pollutant emissions and ambient concentrations, other non-regulatory factors such as economic growth and even the weather also influence environmental quality.

**D. LIABILITY AND REGULATION: EXCLUSIVITY?**

We just showed that on the basis of Shavell's criteria, there is a strong argument to control the environmental risk through ex ante regulation. However,
in individual cases there can still be damage to the environment. Then again liability under tort comes into the picture and the question has been addressed in the literature how regulation influences the liability system and vice versa. These complementarities between tort law and regulation have more particularly been addressed by Rose-Ackerman,16 Faure/Ruegg17 and Kolstad, Ulen and Johnson.18 Rose-Ackerman also compared U.S. and European experiences in using regulation versus tort law in environmental policy.19 The first point which is often stressed, is that the fact that there are many arguments in favor of ex ante regulation of the environment, does not mean that the tort system should not be used any longer for its deterring and compensating functions. One reason to still rely on the tort system is that the effectiveness of (environmental) regulation is dependent upon enforcement, which may be weak. In addition the influence of lobby groups on regulation can to some extent be overcome by combining safety regulation and liability rules. Moreover, safety regulation, e.g. emission standards in licenses, can be outdated fast, which equally merits a combination with tort rules.

Hence, from the above it follows that although there is a strong case for safety regulation to control the environmental risk, tort rules will still play an important role as well. Hence, the question arises what the influence is of regulation on the liability system and vice versa.

E. VIOLATION OF REGULATION AND LIABILITY

The first question to be answered in that respect is whether a violation of a regulatory standard should automatically be considered a fault (or negligence) under tort law and thus lead to liability of the licensee.

Assuming that the license sets the regulatory standard at the efficient care level, a violation of the regulatory standard should indeed lead to liability to give the licensee an incentive to spend on care. However, Shavell argues that the costs of following the regulatory standard are not the same for all injurers. Following the standard might be inefficient for some injurers. The injurers for whom following the regulatory standard would only be possible at high costs should not be held to follow this standard since it would create inefficiencies.20 The question is whether this means that these injurers should not be held liable if they violate the regulatory standard.

This problem can be compared with the bonus pater familias standard used in tort law. Although a detailed individualization of standards of efficient care would be the optimal solution in a first best world this is often impossible given the costs of an individualized standard setting. Therefore, the legal system sets the required level of care at an average level, the so-called bonus pater familias
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standard. The same can be said for regulation. If various groups can be identified at low costs a separate standard for a certain group is efficient as long as the gains from selecting a further group outweigh the further administrative costs. In most cases, however, the regulator will not have the possibility of identifying atypical parties that might be able to avoid a loss at lower costs, for instance because they pose lower risks than normal. Therefore, a single regulatory standard will be used.21

Although one could, therefore, argue that a failure to satisfy the regulatory requirement should not necessarily result in a finding of negligence, so as to avoid some parties who pose lower risks taking wasteful precautions,22 most legal systems generally consider a breach of a regulatory duty a fault. This is the case in Dutch environmental liability law.23 One of the reasons for introducing safety regulation to prevent environmental damage is that the regulator will usually possess better information to evaluate the efficient standard of care than the parties involved. Hence, the regulation passes on information to the parties on the efficient standard of care. The regulation also gives information to the judge who has to evaluate the behavior of the injurer ex post in a liability case. The judge might lack the information necessary to find out whether in a particular case an injurer should not be held to follow the regulatory standard, for example because he posed a lower risk than usual. Therefore, particularly in environmental cases a judge will accept a finding of negligence as soon as a regulatory standard has been breached.24 Thus, the statutory standards can be applied to define negligence.25

F. COMPLIANCE WITH REGULATION AND LIABILITY

Above we have explained that to a large extent the prevention of environmental harm is also achieved as a result of regulation. A lot of attention is paid in the literature to the relationship between regulation and liability. In this respect for instance the question arises whether following a regulatory standard excludes from liability.

In environmental law this is particularly important, since the conditions under which an emission of pollutants is allowed are mostly laid down in a permit. Obviously these permits and their effects on liability can take various forms. In some cases permits and regulations are fairly general, but in other cases they specify emission limits. It is especially in the latter case, that is when specifically allowed releases in a permit have been respected, that the industry often argues that as long as they follow the conditions of that licence, no
finding of negligence in tort law is possible. This is often referred to as the 'justificative effect of a licence' or the 'regulatory compliance defense'. Therefore this issue merits discussion at this point.

The regulatory compliance defense is, however, rejected in legal systems, like in Belgium and in the Netherlands. One can find an economic rationale for this rule. If compliance with a regulatory standard or licence would automatically result in a release from liability, the potential injurer would have no incentive to invest more in care than the regulation asks from him, even if additional care could still reduce the expected accident costs beneficially. A first reason to hold an injurer liable (if the other conditions for liability are met), although he has followed the regulatory standard, is that indeed this standard is often merely a minimum. The complete 'compliance defense' prevents any incentive to take precaution in excess of the regulated standard. Exposure to liability will give the potential injurer incentives to take all efficient precautions, even if this requires more than just following the licence. This, by the way, holds both under negligence and strict liability. Since the regulatory standard can not always take into account all efficient precautionary measures an injurer can take, testing the measures taken by the injurer even though the regulatory standard was followed, will provide additional incentives. Allowing a regulatory compliance defense would also largely remove the beneficial incentive effects of strict liability. As we argued above, strict liability has the advantage that it provides the injurer with incentives to take all efficient measures to reduce the risk (prevention and activity level), even if regulatory conditions were followed. This outcome has been shown formally by Kolstad, Uleas and Johnson and more recently by Burrows. They argue that the complete compliance defense prevents any precaution in excess of the regulated standard. If there is serious under-enforcement of standards, the role of liability as an incentive to take precautions remains important.

A second reason is that exposure to liability might be a good remedy for the unavoidable capturing and public choice effects that play a role when permits are granted. If a permit would always release from liability, all a plant operator would have to do is get a good permit with easy conditions from a friendly civil servant. That would then exclude any law suit for damages from a potential victim. Obviously the capturing and public choice effects should be addressed also via direct tools. In this respect one can think about the liability, even under criminal law, of the licensor. Liability of the licensor (and appropriate sanctions within administrative law) can provide incentives to civil servants to act efficiently when granting licences. This, however, still requires tort law to take into account the fact that regulatory standards are not always set efficiently. If the optimal level of
care is higher than the regulatory standard liability will efficiently provide additional incentives.

Finally, tort law can also be seen as a 'stopgap’ for situations not dealt with by the statute. This makes clear that the exposure to liability notwithstanding the permit is an important guarantee that the plant operator will take efficient care.

Therefore, following the conditions of a license or - more generally - regulatory standards, should not have a justificative effect in tort. The opposite may only be true if it were clear that the administrative agency took into account all potential harm of all interested third parties when setting permit conditions. Indeed, theoretically regulators and licensors are supposed to set standards in regulations and permits in a way that reflects political choices about the level of risks that maximises welfare. Hence, ideally, when setting objective pollution standards, regulators are supposed to weigh costs and benefits of different norms and choose the standard that delivers the highest social net benefit. In such a case, a judge in a civil liability suit should not be “second guessing” efficient agency decisions. It is, however, rare that agencies will be able to take ex ante all these interests and possible damages into account when setting permit conditions. Hence, as a general rule, following licenses or regulatory standards should not free from liability; the opposite would be the exception. This is the case both under a negligence as well as under a strict liability rule. Indeed, holding an injurer liable, notwithstanding he followed regulatory standards, will play an important role under a strict liability rule, since this will lead the injurer to take efficient care and adopt an efficient activity level, i.e. to take all efficient measures to reduce the potential accident costs, although this might require to do more (as far as precaution is concerned) than the regulation requires. Under a negligence rule this case law is also significant if the efficient care standard (which is assumed to be equal to the due care standard required by the legal system) is higher than the regulatory standard. The basic reason remains that efficient preventive measures can be taken above what is often prescribed in the norm. Requiring a potential polluter to take these efficient preventive measures thus increases social welfare.

G. IN SUM

To conclude, I believe that the issues I have addressed in a non-formal way above, have been addressed excellently in the paper by Boyer and Porrini in a more formal manner. The relationship between tort law and regulation and the
optimal combination of both instruments to control externalities is undoubtedly a field on which much more should be published in the near future.

NOTES


6. Since we assume risk-neutrality insurance does not play a role here. If insurance would come into the picture it could overcome the problems of under deterrence, provided that the moral hazard problem, caused by insurance, can be cured.


24. Faure and Van den Bergh have also argued that an advantage of this system is that it gives victims incentives to prove that the regulatory standard has been breached. This makes the victim an enforcer of safety regulation. He can claim compensation under the negligence rule as soon as a causal relationship between the violation of the regulatory standard and his damage is established (Faure, M. and Van den Bergh, R., (1987). o.c., Geneva Papers on Risk and Insurance, 110–111). According to Dutch tort law, however, as one of the requirements of the general tort provision the so-called relativity requirement will also have to be met (in Germany referred to as the 'Schaiznormtheorie').
25. Rose-Ackerman, S., Rethinking the Progressive Agenda, 127.
26. For a comparative analysis of the question whether following a permit excludes criminal liability see, M. Faure/J. C. Oudijk, Die strafgerichtliche Überprüfung von


32. Note, however, that industry argues against such a liability of the licensor, claiming that this may entail the risk that licensors would be too reluctant in allowing emissions, if this could give rise to their liability (G. J. Niezen Aansprakelijkheid voor milieuschade in de Europese Unie in: Ongebonden Recht Bedrijven 2000, p. 171).