

## **A Law and Economics Perspective on Injunctive Relief**

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### ***Abstract***

*The Law and Economics perspective on injunctive relief has been developed primarily from the Calabresi and Melamed (1972) distinction between property rules and liability rules, two different judicial means of enforcing legal rights. Their analysis is predicated on the assumption that, if the prevention of the unlawful activity by an injunction does not reach the efficient solution between the relevant parties, then the latter can modify the terms of the injunction by means of bilateral negotiation, drawing on Coase's social basic analysis. The approach is particularly important once it is appreciated that legal entitlements are imperfectly formulated and that, in appropriate circumstances, legal wrongdoing can increase social welfare. For example, in areas where intellectual property rights are particularly difficult to formulate because of the high technology involved, too rigid an enforcement of those imperfectly targeted rights generates welfare losses.*

*The task for economic analysis is then to determine whether injunctive relief or damages is preferable in the particular circumstances governing the parties' activities. This largely involves comparing on the one hand the welfare losses which arise from imperfect damages award which arise predominantly where the court has high information costs in assessing the plaintiff's losses (particularly where those losses are subjective and therefore cannot be determined by reference to market evaluation) or include irrecoverable third-party losses with, on the other hand, the*

*transaction costs of negotiating a compromise solution or the welfare losses arising from a holdout (both conditions are likely where more than two parties are involved).*

*One branch of the literature has added a new dimension to this analysis. It is concerned to explore how the choice of remedy ex post affects behaviour ex ante, in particular the propensity to invest. In addition, literature on optimal enforcement provides insights regarding the optimal timing of sanctions, which is relevant for the choice between injunctions (the first possible stage of legal intervention) and damages (the last possible stage).*

### ***1. Introduction: some basic economic explanations for injunctions***

According to the classical legal literature, the principal ground for preferring an injunction to damages as a remedy for tortious liability is summed up in the phrase ‘inadequacy of damages’. ‘Inadequacy’ here has different connotations: most usually it reflects the corrective justice idea that the object of a tortious remedy is to make the injured plaintiff whole; and if damages can do this only very imperfectly then an injunction should be ordered (assuming that it is a continuing tort and that it is practicable in the circumstances). A second possibility assumes a more public policy role for tort law. The argument then is that certain forms of wrongdoing are so harmful, either to the individual victim or to society more generally, that the law should prevent them, if it is possible: hence an injunction, rather than damages.

At a simple level, economic reasoning can assist in explaining these two ideas. As regards the first, compensatory, objective, it is important to recognize the difference between ‘wealth’ and ‘utility’. The value of an asset, and therefore of a legal right, to its owner is the utility which is conferred on that person. Although it is possible to translate utility into wealth, by reference to the amount for which the

individual is willing to sell the asset (or right), that amount is only known to that person and cannot easily be ascertained by a third party, such as a judge trying to estimate the value of an asset for the purposes of a damages award.<sup>1</sup> Assessment for the purposes of damages is generally done by reference to the asset's market value, since this can normally be readily observed. Economists refer to the difference between the market value and the personal subjective value as the 'consumer surplus'.<sup>2</sup> Where, in a given action, the consumer surplus is significantly high, the problem for the court in attributing a monetary value to it may, then, justify ordering an injunction. This line of reasoning does not hold for assets for which there is a well functioning market available on which perfect substitutes are available. After all, the consumer surplus that was acquired by the destroyed asset can again be acquired by the substitute. Hence, granting damages which enable the victim to replace his asset also enable him to reach the same utility level again. Even though assessing that utility level may be difficult or impossible due to its subjective nature, assessing the damages which enable the victim to replace his asset is much easier. However, in so far as substitutes are not perfect, so that replacement does not necessarily yield the same level of utility, problems of correctly determining damages indeed provide an argument for injunctive relief.

Justifying injunctions by reference to the second, public policy, objective may be facilitated by invoking the economic notion of a 'negative externality'. Fundamentally economic welfare is generated through private property rights and the

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<sup>1</sup> We leave aside the debate whether 'willingness to pay' (when acquiring a right) or 'willingness to accept' (when selling a right) is the better measure to determine the value of a right to a person. Given that we are dealing in this paper with the protection of a right that a person already has, the above-described willingness to accept seems the more appropriate measure. The important issue for our argument is that this willingness is only subjectively known. That same problem holds for the willingness to pay.

<sup>2</sup> See e.g. Harris *et al*, 'Contract Remedies and the Consumer Surplus', 75 *Law Quarterly Review* (1979), 582 ff.

enforcement of contractual obligations between those exploiting the property rights, but allocative efficiency, or welfare maximisation, may be prejudiced if the activity creates negative externalities, that is adversely affects third parties. After all, even if all parties involved in transaction gain by the transfer of entitlements, third parties may suffer losses which outweigh the gains of the transferring parties. In principle, the third parties may have private legal rights against the externality creator but problems occur where the externalities are widespread and there is potentially a multiplicity of claims. In such cases, the third parties may remain ‘rationally apathetic’, meaning that they do not take action against the externality creator, because the costs involved outweigh the expected damages. Most frequently the problem in such cases is solved by some form of public law intervention but, as an alternative, one or more of the third parties may be allowed to restrain the harmful activity by an injunction, thus economising on the proliferation of expensive damages claims. However, rational apathy and free-rider problems may frustrate this solution, because those third parties who initiate the lawsuit bear all the costs, while the benefits are borne by all third parties who suffered from the externality.<sup>3</sup>

In our paper, we will analyze injunctive relief from the perspective of three different strands of literature. The first approach is based on the framework developed by Calabresi and Melamed, who distinguish between different ways of protecting entitlements.<sup>4</sup> So-called ‘property rule’ protection implies that an entitlement can only be taken away from the holder after his consent. ‘Liability rule’ protection, on the

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<sup>3</sup> In such cases, punitive damages may be a more effective instrument to let the wrongdoer internalize the externality, because the larger expected damages may overcome the rational apathy problem. See e.g. Visscher, ‘Economic Analysis of Punitive Damages’, in: H. Koziol and V. Wilcox (eds.), *Punitive Damages: Common Law and Civil Law Perspectives*, (Springer, 2009), 222.

<sup>4</sup> Calabresi and Melamed, ‘Property Rules, Liability Rules, and Inalienability: One View of the Cathedral’, 85 *Harvard Law Review* (1972), 1089-1128.

other hand, means that the entitlement can be taken away from the holder without his consent, provided that an objectively determined price is paid to him. Hence, property rule protection is connected with injunctive relief, whereas liability rule protection resembles damages. The Calabresi and Melamed framework provides insights concerning the relative desirability of each form of protection.

The second approach, initiated by Bebchuk,<sup>5</sup> puts the property rule – liability rule distinction in an ex ante setting. The dominant question here is not which form of protection provides the best solution ex post, taking the activities of the parties involved as given, but which approach gives better incentives ex ante, e.g. in engaging in the activity in the first place. An actor who considers engaging in an activity which can cause future losses may respond differently to the possibility that the activity will be enjoined (after which he can try to negotiate with the plaintiff to receive consent) than to the mere possibility that he will be ordered to pay damages.

The third approach we will discuss is embedded in the literature regarding *optimal enforcement*, more specifically regarding the optimal timing of sanctions. In this literature, there are studies of tort law (and other fields of law) exploring their capacity to induce actors to act in a desirable way. The possible legal instruments for providing these incentives are divided into three groups: harm-based sanctions (e.g. damages), act-based sanctions (e.g. fines) and preclusion (i.e. injunctive relief). This literature develops criteria to determine which type of sanction is better under which circumstances.

In our view, the arguments presented are valuable for assessing legal cases, doctrine and the ongoing debates on the topic of injunctive relief. They depart from the case-by-case ex post approach which characterizes most legal discussions, and

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<sup>5</sup> Bebchuk, 'Property Rights and Liability Rules: The Ex Ante View of the Cathedral', 100 *Michigan Law Review* (2001), 601-639.

they offer a coherent framework for assessing the behavioural incentives provided by injunction and damages and hence assist in deciding under what circumstances which approach is to be preferred.

## ***2. The ex post approach***

### ***2.1 Imperfect legal formulation and efficient wrongdoing***

Lawyers understandably tend to exaggerate the importance of compliance with legal obligations: for them, infringements should be prevented or at least effectively deterred; and, for this purpose, obviously injunctions are powerful instruments. An economic perspective suggests a more nuanced approach. Many forms of wrongdoing can generate economic welfare simply because those formulating legal obligations are not able, or do not have the necessary information, to target the rules precisely on what is, and what is not, desirable.<sup>6</sup> In economic terms, legal rules are designed to create incentives for behaviour which is welfare-maximising but, of course, because of problems in acquiring adequate information on what rules are necessary for this purpose, ambiguities in the signals for actors which legal rules generate, and most obviously, the desire to avoid overly complex rules, they can do so only imperfectly. Specifically enforcing such rules through, for example, an injunction, may then in certain circumstances inhibit behaviour which would increase social welfare.

By way of example, take a situation where a trespass to private property causes only a trivial amount of harm to the owner but generates significant benefits for the trespasser. Here, presumably, if the parties had engaged in ex ante bargaining, the owner would have consented to the trespass on payment of a sum exceeding the

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<sup>6</sup> Ogus, *Costs and Cautionary Tales: Economic Insights for the Law*, (Hart Publishing, 2006).

trivial loss which he would sustain and the trespasser would be able to make sufficient profit from the wrong to pay such a sum and still gain. While, as we shall see in the next section, this outcome is not necessarily inconsistent with the imposition of injunction, because the owner can agree to release the trespasser from the court order, a damages remedy, paying the owner compensation for the trivial damage, should achieve the same outcome by much simpler means.<sup>7</sup>

Some important policy insights follow from this reasoning. For example, intellectual property rights are, in general, particularly difficult to formulate with precision. This is because, given the technological basis of the law, courts cannot easily define the area to be protected without straying into adjoining areas where protection is not justified.<sup>8</sup> This suggests that in most patent cases, but also in some areas of copyright and trademark law, injunctions should be employed only with caution if significant welfare losses are to be avoided.<sup>9</sup>

We should note, at this point, that normative judgements about ‘efficient outcomes’ and ‘welfare maximisation’ are not as straightforward as many economists would lead us to believe. In particular, there is often ambiguity between two different tests of improvement to social welfare. According to the Pareto test there can only be an improvement if no-one loses, while according to the Kaldor-Hicks test it is sufficient if aggregate gains exceed aggregate losses. It will at once be apparent that if

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<sup>7</sup> In situations where the gain to the trespasser exceeds the harm to the owner, one can even ask whether damages are appropriate. As a result of the trespass, total welfare has increased, and a subsequent lawsuit for damages only causes (administrative) costs, while it does not affect the behaviour of the trespasser. After all, he will be willing to pay the damages, and still trespass. So, in as far as the legal rules are intended to deter ‘excessive trespassing’, liability makes no sense under these circumstances. However, if the lack of liability of the trespasser induces the owner to invest excessively in measures which aim at deterring trespassing, liability may be preferable after all. For an analysis of the defense of necessity based upon this line of reasoning, see e.g. Visscher, ‘Justifications and Excuses in the Economic Analysis of Tort Law’, in: P. Sabiha Khanum (ed.), *Economic Torts*, (Icfai University Press, 2009), 34 ff.

<sup>8</sup> Lemley and Weiser, ‘Should Property or Liability Rules Govern Information’, 85 *Texas Law Review* (2007), 822 ff.

<sup>9</sup> Schankerman and Scotchmer, ‘Damages and Injunctions in Protecting Intellectual Property’, 32 *Rand Journal of Economics* (2001), 218.

we apply the Pareto test, we can allow compensated legal wrongdoing only if the damages award provides (more than) full compensation for the claimant's loss; and, as we have already seen, that may be problematic if the loss contains a subjective dimension. Those favouring the Pareto test will therefore have a preference for injunctions over damages.

To investigate this dimension further it is helpful to adopt the methodology that was established by Calabresi and Melamed in their famous paper on property rules and liability rules.

## ***2.2 Property rules and liability rules***

Calabresi and Melamed distinguish two phases in their analysis of the protection of legal entitlements. In the *first order legal decision*, in a situation of conflicting interests, it has to be decided whose interest will prevail. The person whose interest prevails, gets a legal entitlement (sometimes in the form of a subjective right, sometimes in the form of a legally recognized interest)<sup>10</sup> to do something, to own something, to enjoy something et cetera. For example, if a factory would like to use a lake to take in cooling water for its machines and to drain the warm water, while fishermen want to use the lake to catch fish, and if the fish are negatively affected by an increase in temperature of the lake, the factory and fishermen clearly have opposing interests. The first order legal decision entails granting the entitlement to one of the parties: either the factory is entitled to use the lake for cooling water, or the fishermen are entitled to undisturbed use of the lake for fishing. In deciding which

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<sup>10</sup> For our paper, the exact form of the entitlement, be it a right or an interest, is not relevant. Therefore, we use the terms as synonyms.



party should receive the entitlement, attention could be given to the question who values the entitlement the highest, so that social welfare is maximized.

For the topic of our paper, the *second order legal decision* is more relevant: after the entitlement has been granted, it has to be protected. Calabresi and Melamed classify entitlements according to the degree of protection afforded by the law to the right-holder. If a right is protected by a 'liability rule' the only legal remedy available for its infringement is that of compensation, usually in the form of a damages award. The involvement of the state is limited to the assessment and enforcement of the award. The important implication of this is that the law tolerates an infringement (in other words, a transfer without the consent of the holder of the entitlement), provided that the infringer subsequently compensates the right-holder for the loss sustained. If the entitlement is instead protected by a 'property rule', the only accepted method of transfer is a voluntary transaction, with the *ex ante* consent of the holder of the entitlement. The police power of the state can be invoked by the right-holder physically to prevent invasion by others, in the law of tort by an injunction (and for breaches of contract by specific performance).

An important feature of a property rule, sometimes overlooked by academic lawyers, is that the power to invoke the police power of the state can, in general,<sup>11</sup> be waived by the right-holder, so that, for an appropriate payment, the defendant can be released from the legal obligation. This possibility has great significance for the choice between injunctions and damages,<sup>12</sup> for, assuming rational behaviour, the right-holder will only be prepared to release the defendant from the court order on

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<sup>11</sup> For public policy reasons certain rights do not have this characteristic, because the rights (e.g. to personal freedom) are regarded as being so fundamental that they should not be the subject of market transactions. Calabresi and Melamed, 85 *Harvard Law Review* (1972), 1111 ff refer to this as a 'rule of inalienability'.

<sup>12</sup> Thompson, 'Injunction Negotiations: An Economic, Moral, and Legal Analysis', 27 *Stanford Law Review* (1975).

receipt of a sum which represents the real subjective value of the loss of the right. In other words, the solution of injunction plus negotiated release can overcome the problem associated with damages awards, that they cannot adequately reflect the claimant's subjective evaluation (the 'consumer surplus') of the loss. In short, with an appropriate negotiated release, injunctions can lead to Pareto efficiency.

The Dutch case of the '*Border Crossing Garage*'<sup>13</sup> provides a nice example of this idea. In 1964, X built a garage next to a hedge which seemed to be the border between his property and that of his neighbour Y. The hedge had been there since 1952. When X started to build, there was some doubt whether the hedge was placed correctly, but both X and Y expected that a possible misalignment of the hedge would not exceed a few centimetres, for which damages would suffice. When the garage was finished, Y requested a formal measurement and it turned out that the garage exceeded the border by about 75 centimetres, over the full length of six meters. Y subsequently requested the garage to be demolished. The debate centred round the question if this request was an abuse of right so that Y should settle for damages. According to the Supreme Court, Y did not abuse her right by requesting demolition. However, after this ruling, Y in fact settled for an amount of money. In a legal annotation of this case, it is correctly argued that in principle, the owner of the land should indeed be free to choose between damages and demolition, because it is very difficult to calculate the negative consequences of losing part of her land. One person may prefer receiving an amount of money; another may prefer the land itself. This obviously refers to the subjective elements of the 'consumer surplus'. The question now arises why the parties involved did not reach an agreement regarding payment of a sum of money in the first place, without the intervention of the Supreme Court. The

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<sup>13</sup> Supreme Court April 17, 1970, *NJ* 1971, 89.

explanation could be that as long as it was not certain which party was entitled to the use of the strip of land (hence, the question regarding abuse of right), it also was not certain who had to buy out whom. The legal ruling provided the necessary clarity: the entitlement belongs to Y so that X will have to buy out Y. This characteristic, that the division of entitlements has to be clear in order for negotiations to be feasible, is one of the fundamental requirements of the so-called Coase-theorem.<sup>14</sup>

Ronald Coase argues that the efficient resolution of problems of conflicts of resources can be achieved by appropriate bargaining in the market, whatever the nature of the legal obligations, provided that such transactions can take place at low or trivial cost. The important implication of this in our context, in determining whether an injunction is economically preferable to damages as the tort remedy, is that it is necessary to investigate the likely incidence of transactions costs arising in either scenario.<sup>15</sup>

For this purpose, it is necessary to give an extended meaning to ‘transactions costs’, so that they include, for example, administrative and information costs. As is argued above, clarity regarding the division of entitlements is a prerequisite for low transaction costs. Broadly speaking, if transaction costs are zero or at least low, property rule protection, hence an injunction, is to be preferred. In the event that the entitlement in the first order decision was not granted to the party who values it highest, parties are able to enter in negotiations. After a voluntary transaction, we know that the transaction has increased social welfare, because both the buyer and the seller are better off (otherwise they would not have agreed to the transfer). On the other hand, if transaction costs are high, property rule protection may hinder welfare-increasing transactions, so that liability rule protection, hence a damages action, may

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<sup>14</sup> Coase, ‘The Problem of Social Cost’, 3 *Journal of Law and Economics* (1960).

<sup>15</sup> Polinsky, ‘Controlling Externalities and Protecting Entitlements: Property Right, Liability Rule and Tax-Subsidy Approach’, 8 *Journal of Legal Studies* (1979).

be more desirable. However, possible problems in determining the correct amount of damages, e.g. due to the subjective nature of the losses, limit the preference for liability rules. William Landes and Richard Posner have formulated this idea as follows: ‘When the costs of voluntary market transactions are low, the property approach is economically preferable to the liability approach because the market is a more reliable register of values than the legal system’.<sup>16</sup> Motorized traffic is an obvious example of a setting with high transaction costs: it is impossible for all traffic participants to negotiate with each other regarding the price to be paid to put all other traffic participants in danger by travelling on the highway. Property rule protection of the entitlement not to be injured therefore would make motorized traffic impossible. This is regarded as a too high price to pay, so that traffic is dealt with by liability rules, even though correctly assessing damages may be very difficult, especially regarding immaterial losses.<sup>17</sup>

We cannot provide a comprehensive analysis here of the circumstances in which an injunction with a negotiated release is likely to be a more efficient remedy than damages, but a few categorisations of typical cases should give a sufficient idea of the reasoning. First, and most obviously, unless it is clear that an absolute cessation of the unlawful activity is desirable, so that no form of release is to be envisaged, for an injunction to be a low-cost solution, the parties must be in a position to be able to bargain, and that normally means that the tort is continuing (for example, unlawful

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<sup>16</sup> Landes and Posner, *The Economic Structure of Tort Law*, (Harvard University Press, 1987), 31.

<sup>17</sup> Of course, behaviour that is manifestly undesirable because it creates substantially more costs than benefits can still be dealt with by property rules, e.g. drunk driving, excessive speeding, driving without a licence, et cetera. An injunction restraining such socially undesirable behaviour is therefore a good remedy. However, such an approach should be taken only after a thorough analysis of the behaviour under consideration. Jumping to the conclusion of undesirability on the basis of a ‘gut feeling’ that certain risks should not be created in the first place and therefore should be enjoined because they are morally wrong, may disregard the possible benefits which the endangering activity entails, or the costs involved in avoiding those risks.

possession of property or pollution) and that there is some proximity between the parties. This suggests, as already explained above, that where the transactions costs of bargaining are low, injunctions are to be preferred. It has been pointed out that in such a situation, bargaining costs to compromise a damages claim and to settle out of court, are also likely to be low, and so the consideration is not conclusive.<sup>18</sup> However, bargaining under liability rules suffers from several problems which are absent with bargaining under property rules, so that in most cases of low transaction costs there is still a preference for an injunction with a negotiated release. In essence, what may happen with bargaining under liability rules is that the holder of the entitlement tries to buy off the potential tortfeasor, who considers taking away the entitlement and paying the objectively determined price. If the holder is successful in his attempt, in some cases he still runs the risk that other potential tortfeasors may become involved, thus necessitating further buy-off transactions. Having repeatedly to buy off potential infringers may become too expensive so that the holder may be induced to refrain from doing so already after the first infringement, even though he may value the entitlement higher than the objectively determined price. In addition, if the holder is not successful in his attempt and the entitlement is taken away from him, he may try to take it back from the tortfeasor, et cetera.<sup>19</sup> Finally, holders and potential tortfeasors respectively may invest in measures to avoid or enable the involuntary transfer, which is a waste of resources. Property rule protection would have avoided these problems.<sup>20</sup> In addition to these problems with bargaining, liability rules may also require more

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<sup>18</sup> Kaplow and Shavell, 'Property Rules versus Liability Rules: An Economic Analysis', 109 *Harvard Law Review* (1996), 732 ff.

<sup>19</sup> This reciprocal taking may have an advantage as well, because it induces the parties in every additional round to reveal information about their subjective valuation of the asset so that ultimately it may end up with the party who values it the highest. See Ayres and Balkin, 'Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond', 106 *Yale Law Journal* (1996), 720 ff.

<sup>20</sup> Kaplow and Shavell, 109 *Harvard Law Review* (1996), 766 ff.

(costly) government interference because, apart from allocating the entitlements, damages have to be determined.

Secondly, where the claimant's loss is likely to contain a significant subjective component, an injunction should normally be ordered because the cost to the court of obtaining information sufficient to make a reasonable estimate of the value is likely to be higher than the cost of bargaining a release to the injunction, which will guarantee that the claimant's personal loss will be fully compensated. The higher the assessment costs of determining the proper amount of damages, the less attractive liability rule protection becomes.<sup>21</sup>

Thirdly, in situations where the cost of bargaining to negotiate a release from an injunction is likely to be high, damages are appropriate. This typically occurs where the activity infringes rights belonging to a number of individuals, particularly where their interests are not homogeneous.<sup>22</sup> Here, not only are there very significant costs arising from multiple transactions, particularly from coordinating bargaining between the parties; there is also the risk that some of the right-holders will exploit the power of veto inherent in the situation and attempt to 'hold out' for a sum which exceeds their personal loss.<sup>23</sup>

Even when only two parties are involved, bargaining may not be straightforward because either or both engages in strategic behaviour, attempting to extract the maximum from the deal.<sup>24</sup> Indeed, it has been argued that, since negotiating release from, or alteration of the terms of, an injunction effectively places the parties in a bilateral monopoly situation, the incentive to behave strategically in an

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<sup>21</sup> Krier and Schwab, 'Property Rules and Liability Rules: The Cathedral in Another Light', 70 *New York University Law Review* (1995), 454.

<sup>22</sup> Hylton, 'Property Rules and Liability Rules, Once Again', 2 *Review of Law & Economics* 2 (2006), Article 1, 147 ff.

<sup>23</sup> Krier and Schwab, 70 *New York University Law Review* (1995), 450.

<sup>24</sup> Farrell, 'Information and the Coase Theorem', 1 *Journal of Economic Perspectives*, 117 ff.

attempt to secure the largest part of the surplus which would be created by a successful agreement, will so often constitute a barrier that in most cases the damages solution is preferable.<sup>25</sup>

### ***3. Ex ante considerations***

An importance difference between legal and economic reasoning is that whereas the former typically adopts an ex post perspective on legal disputes – an event has happened; what remedy will provide an appropriate (just) resolution to the problem? – economics typically investigates the ex ante implications of the solution – what impact will a given solution have on future conduct? So, it is important to consider the incentive effects of imposing an injunction, rather than simply awarding damages.

Bebchuk has analyzed the impact of property rule protection and liability rule protection on the ex ante incentives of the parties to invest in their activity (in order to increase its value) and on the impact on their ex ante care incentives (in order to reduce the magnitude of harm).<sup>26</sup> We will explain Bebachuk's line of reasoning with an example based on the case of *Spur Industries, Inc. v. Del E. Webb Development Co.*<sup>27</sup> In a rural area, Spur wants to develop a cattle feedlot, while Del Web wants to develop a resort in the neighbourhood. Given that a cattle feedlot causes smell and noise and attracts flies, if both enterprises are successful and grow towards each other, Del Web will not be able to sell all houses which are closest to the feedlot. Both Spur

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<sup>25</sup> Boudreaux, 'The Coase Theorem and Strategic Bargaining', 3 *Advances in Austrian Economics* (2006), 97 ff.

<sup>26</sup> Bebachuk, 100 *Michigan Law Review* (2001), 601-639. See also Weiser, 'The Real Estate Covenant as Commons: Incomplete Contract Remedies over Time', 13 *Southern California Interdisciplinary Law Journal* (2004), 269-330, who applies the reasoning to the choice of remedy for breach of restrictive covenant in land law, and its impact on real estate investment.

<sup>27</sup> 108 Ariz. 178, 494 P.2d 700 (1972).

and Del Web derive benefits from locating in the area, but if *both* locate there, Del Web suffers a harm which lowers its net benefits.

Whether or not it is desirable for both parties to engage in their activity or for only one of them to do so, depends on the revenues of both activities and the harm caused if both are present. However, before the parties know if the other will locate in the area and if they will be so successful that harm will occur, they already have to decide how much to invest in their activity. From the viewpoint of maximizing social welfare, it is only desirable that a party invests an additional euro in his activity, if this yields at least an additional euro in the situation where it turns out to be desirable that this party is present in the area.

For example, assume that it is best for social welfare that both parties are present in 50% of the cases, while it is better that only Spur or Del Web are present in 30% and 20% of the cases respectively. Spur then should only invest an additional euro if the expected revenues grow by at least €1.25, because only in 80% of the cases is it desirable that Spur is present, and 80% of €1.25 equals €1. In the other 20%, the investment is socially worthless, because Spur should not be present to start with. Along the same line of reasoning, Del Web should only invest €1 if it yields at least €1.43, because only in 70% of the cases should he be present, and 70% of €1.43 equals €1.

The private investment decisions depend on the private costs and benefits of investing, and these depend on the legal rule. If Del Web can file for an injunction (hence, he receives the entitlement and it is protected by a property rule), this means that Spur



has to buy out Del Web. Assuming that the parties have equal bargaining skills so that a surplus would be split evenly between them, Spur only receives half of the revenues of his investment; the other half accrues to Del Web. Spur hence only invests €1 if it yields at least €2.50, rather than the socially optimal €1.25, leading to a too low investment level by Spur.<sup>28</sup> Del Web on the other hand would invest too much, because it not only expects a return on investment in the 70% of the cases where it should be present, but it also expects half of the revenues in the 30% where it should *not* be present, because Spur has to buy Del Web out. Hence, Del Web invests €1 as long as it yields at least €1.18 rather than €1.43.<sup>29</sup> So, property rule protection of Del results in underinvestment of Spur because it bears the full costs of investment but the revenues partly go to Del Web. It simultaneously leads to overinvestment of Del Web because it receives some return on investment (through a higher price in the negotiated release) in the situation where it should not invest in the first place.

Property rule protection of Spur would result in the opposite problems, the underlying line of reasoning being the same as above: Del Web would bear the full costs of investment but not receive full benefits, and Spur would expect a return on investment also in the situation where it should not invest in the first place.<sup>30</sup>

If Del Web can only claim damages, Spur would invest optimally, because it yields all the benefits of additional investments which exceed the losses caused by

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<sup>28</sup>. In 80% of the cases Spur receives a return on investment (in the other 20% of the cases, Spur should not be present), but 50% of these benefits go to Del Web in the negotiated release. Hence, Spur receives only 40% ( $80\% \cdot 50\%$ ) of the return on investment and therefore only invests €1 if it yields at least €2.50.

<sup>29</sup>. Del Web receives the full return on investment in 70% of the cases, and in the remaining 30% it still is able to extract half of the revenues in the negotiated release. Hence, it invests €1 if 85% ( $70\% + 50\% \cdot 30\%$ ) of the expected revenues equal at least €1, hence if the expected return is at least €1.18 (the amount is rounded off to two decimals).

<sup>30</sup>. Spur would receive benefits in the regular 80% of the cases, but in the 20% where it should not be present, it still receives half of the increase in value in the negotiated release. It therefore invests €1 as long as 90% ( $80\% + 50\% \cdot 20\%$ ) of the additional revenues are at least €1, so as long as the €1 investment yields at least €1.11. The socially correct level, however, is €1.25. Del Web takes account of the fact that in 20% of the cases, it will have to pay half of its revenues to Spur in the negotiated release. Hence, it only invests €1 if 60% ( $70\% - 50\% \cdot 20\%$ ) of the revenues are at least €1, so if the revenues are at least €1.67 rather than the optimal €1.43.

those investments, assuming that the damages are assessed correctly. However, Del Web would invest even more excessively than under property rule protection. All additional investments which have increased the value of its activity and which are now useless because of the Spur's activity, are fully restored by a damages award.<sup>31</sup> Finally, liability rule protection of Spur, meaning that Del Web can stop Spur's activity but then has to compensate Spur for the resulting losses (or relocation costs), results in the opposite situation: Del Web invests efficiently because it fully internalizes the externality, while Spur strongly over invests.<sup>32</sup>

The form of protection ex post may also influence care incentives ex ante. It is socially optimal that both parties spend an additional euro on ex ante care measures, if such measures lower expected harm by at least €2. After all, only in half of the cases is it optimal that both parties are present, so only in half of the cases are the care measures needed (if only one of the parties is present, there will be no harm and any ex ante care measures turn out to be useless). If Del Web can file for an injunction, Spur will spend too little on care measures, because it bears the full costs of these, but only enjoys part of the benefits, the other part accruing to Del Web in the negotiated release. The same holds for Del Web: it bears the full costs of additional care measures, while Spur will partially benefit, because due to the decreased harm it will have to pay a lower price under the negotiated release.<sup>33</sup> If Del Web could only file

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<sup>31</sup>. Given that there is no negotiated release, Del Web cannot extract anything from Spur, so that Spur receives the full returns on its own investment and therefore invests as long as €1 yields at least €1.25, which is socially optimal. However, because Del Web will now also receive damages in the 30% of the cases where only Spur should have been present, it expects the full return on investment in any case. It therefore invests €1 as long as this yields at least €1, rather than the socially desirable €1.43.

<sup>32</sup>. In this situation, Del Web always receives full return on investment and therefore invests as long as €1 yields at least €1.43, which is socially optimal. However, Spur now invests as long as €1 yields at least €1. This was indeed the decision taken by the Court: Del Web had to compensate Spur for the losses from being closed down, *i.e.* the costs of relocating.

<sup>33</sup>. From any reduction in harm caused by care measures taken by Spur, Spur only receives half in the form of a lower price it has to pay to Del Web in the negotiated release. Spur therefore only invests €1 if it reduces harm by at least €4: only in 50% of the cases is the measure required anyway, and in those

for damages, Spur would take optimal care because it bears the full costs but it also enjoys the full benefits of those measures. Del Web, however, receives no care incentives at all, because all its losses will be compensated by Spur (assuming absence of a defence of comparative or contributory negligence).<sup>34</sup> The opposite holds under liability rule protection of Spur: Del Web takes optimal care, but Spur takes no care. Finally, property rule protection of Spur will lead it to take no care at all because it will not pay for the losses of Del Web anyway. The latter will take excessive care because the lower the harm if Spur keeps on being active, the lower the price Del Web will have to pay to buy off Spur.

Bebchuk concludes that none of the rules can provide optimal incentives in all circumstances and so, having regard to ex ante incentives, the choice must depend on a weighing of the different incentives provided by the alternative rules in the specific situation.

Article 6:168 of the Dutch Civil Code states that the court can reject a claim for injunction, and that the unlawful act has to be tolerated, where there are substantial public interest considerations. However, the victim maintains his right to damages. If the damages are not paid, the behaviour may be enjoined after all. This provision enables a court to take into account some of the considerations indicated by Bebhuk. For example, suppose that construction work leads to losses for the owner of a neighbouring property, but the construction work is regarded as socially desirable nonetheless. The possibility of an injunction might not be desirable here because it could give too much bargaining power to the potential victim, who might try to extract a large part of the value created by the construction. This could make

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50%, half of its benefits go to Del Web. The same goes for Del Web: from any reduction in harm due to ex ante care measures, half flows to Spur who now pays a lower price in the negotiated release.

<sup>34</sup>. Spur fully receives the benefits of taking care, because it lowers the damages it has to pay. Hence, Spur spends an additional euro on care as long as it lowers expected harm with at least €2, which is socially correct.

development and construction less attractive to land developers, leading to ex ante investment problems. On the other hand, not protecting the victim at all would make the construction too cheap, because it does not include the costs imposed on others. This could lead to too much investment with too little care measures. It is therefore desirable that such activities be considered a tort, without however the possibility of injunctive relief for the victim. Article 6:168 does exactly this. It also enables e.g. the government to carry out work in the 'general interest' without the fear of being enjoined, and through the action for damages the cost of the work is spread over taxpayers rather than borne by individual victims.

The provision that an injunction is possible after all if damages are not paid, does not create problems for the ex ante investment and care incentives, because the tortfeasor can avoid the injunction by paying the damages. The fact that the victim can file for an injunction if the damages are not paid, reinforces the latter as the primary remedy. After all, the prospect of an injunction will be even less attractive to the tortfeasor, because he then has to negotiate a release from the victim. Given that the tortfeasor did not pay the damages when he was ordered to, it is likely that the victim will not allow the damaging behaviour for a price lower than the original damages.

#### ***4. Optimal enforcement - timing of sanctions***

The third strand of literature we want to discuss in our paper relates to the topic of optimal enforcement and the timing of sanctions. Legal rules can be seen as instruments to combat the negative consequences of different types of market failures.

Tort law aims at internalizing negative externalities. Avoiding negative consequences for others can also be aimed for by tax law (e.g. levying the use of energy), administrative law (e.g. requiring permits which include necessary measures to avoid negative consequences for others), and criminal law (fining undesirable behaviour or even imprisoning the wrongdoer). In the economic literature, several criteria have been developed which determine which legal instrument is better suited under different circumstances.<sup>35</sup>

One key issue is the timing of legal intervention. The earliest possibility for legal intervention is to prevent the act which causes the externalities, often through force or physical barriers. This is referred to as *preclusion*. An injunction is an example of preclusion, because the potential tortfeasor is not or no longer able lawfully to engage in the damaging behaviour, e.g. because his factory has been closed down. Injunctions which can be sought *before* an unlawful act has been committed are known as *quia timet* injunctions. The second possible stage of legal intervention is after the act, but before harm has occurred or irrespective whether harm will occur. Speeding tickets are examples of such *act-based sanctions*. Tort law does generally not make use of this type of sanction, although injunctions which are only issued after the tort has begun but before the occurrence of harm may be regarded as act-based. If the injunction would also have been possible before the act, we prefer to regard it as preclusion, though, because the fact that the act was already

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<sup>35</sup> See e.g. Landes and Posner, 'The private enforcement of law', 4 *Journal of Legal Studies* 1975, p. 1-46; Polinsky, 'Private versus public enforcement of fines', 9 *Journal of Legal Studies* (1980), 105-127; Friedman, 'Efficient institutions for the private enforcement of law', 13 *Journal of Legal Studies* (1984), 379-397; Shavell, 'Liability for Harm Versus Regulation of Safety', 13 *Journal of Legal Studies* (1984), 357-374; Shavell, 'The optimal structure of law enforcement', 36 *Journal of Law and Economics* (1993), 255-287; Polinsky and Shavell, 'Public Enforcement of Law', in B. Bouckaert and G. De Geest (eds.), *Encyclopedia of Law and Economics. Volume V. The Economics of Crime and Litigation*, (Edward Elgar, 2000), 307-344; Ogus and Abbott, 'Sanctions for Pollution: Do We Have The Right Regime?', 14 *Journal of Environmental Law* (2002), 283-298 and Innes, 'Enforcement costs, optimal sanctions, and the choice between ex-post liability and ex-ante regulation', 24 *International review of Law and Economics* (2004), 29-48.

committed then is no prerequisite. Only if the preceding tort is necessary for the injunction to be granted, should it be regarded as an act-based sanction. The third stage is after occurrence of harm. Tort damages are a good example of such *harm-based* damages: without losses, an action for damages is not possible.<sup>36</sup>

Several factors influence the optimal timing of legal intervention.<sup>37</sup> First, if the (financial) magnitude of the possible sanctions is limited, e.g. due to the problem of the defendant being judgment proof, they may not be able adequately to deter, so that preclusion is the only possible effective alternative. Second, if it is difficult to preclude by force or physical measures, or if it is too expensive because it requires constant monitoring, act-based or harm-based sanctions become more appealing. In so far as the mere occurrence of harm is a signal of unlawful behaviour, harm-based sanctions are attractive because they save on enforcement costs. Third, the available information is important. If actors know that their behaviour is dangerous, harm-based sanctions can work well. If they do not know how dangerous their behaviour is but they do know that it is not legally permitted, act-based sanctions are preferable. If even this last type of information is not known, preclusion is the only option. Finally, the enforcement costs of the different types of legal intervention vary. The cheaper preclusion can be attained, the less attractive sanctions at the later stages become. An advantage of harm-based sanctions is that they only have to be applied after losses have actually occurred, instead of in all cases where losses may occur or even all cases where potentially damaging behaviour may occur.

The literature on optimal timing of legal intervention discusses the whole range of possible legal sanctions, whereas for our paper only the comparison between

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<sup>36</sup> An alternative terminology for act-based and harm-based sanction is *input monitoring* and *output monitoring*. See Wittman, 'Prior Regulation versus Post Liability: The Choice Between Input and Output Monitoring', 6 *Journal of Legal Studies* (1977), 193.

<sup>37</sup> Shavell, 36 *Journal of Law and Economics* (1993), 261 ff.

injunctions and damages is relevant. Injunctions are a special case of preclusion, because they require court intervention and presuppose a link between the tortfeasor and the victims. The archetypal example of preclusion used in the economic literature is fencing a terrain to avoid people dumping their hazardous waste. Such preclusion, by simply fencing the area and possibly guarding the terrain, avoids the undesirable behaviour by *all* potential waste dumpers. In case of an injunction, however, the intervention is aimed at one specific potential injurer and is issued by a court at the request of a specific victim. Therefore, not all factors distinguished in the literature are equally relevant. This holds even more when injunctions are only issued after certain undesirable behaviour has already occurred (so that it is more an act-based sanction than preclusion) or even only after harm has already materialized (in which case it can even be labelled as a harm-based sanction).<sup>38</sup>

Given these features, the most important insights from the optimal enforcement literature for the topic of injunctive relief are the following: (1) if the injurer is judgement proof so that he cannot fully pay the damages, injunctive relief is to be preferred; (2) the more difficult it is to monitor whether the injurer has committed the forbidden behaviour, the more attractive harm-based sanctions (so damages or an injunction after losses have materialized); (3) the less often certain behaviour results in losses, the less often an injunction of that behaviour should be granted, because the enforcement costs of harm-based sanctions (i.e. damages) are much lower.

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<sup>38</sup> See e.g. the decision of the American Supreme Court in *eBay Inc. v. MercExchange, L.L.C.*, 126 S.Ct. 1837 (2006), where it was considered that in cases of alleged patent infringements, injunctions should not be granted almost automatically upon request of the plaintiff, but only after having carried out a balancing test. The first element of this test implies that an injunction can only be granted if the plaintiff has suffered an irreparable injury.

## ***5. Conclusion***

The economic perspective leads us to draw the following principal conclusions on when injunctive relief is to be preferred to damages as a tort remedy. First, and this is consistent with traditional legal analysis, where there is a significant subjective dimension to the value of the entitlement, then in the absence of countervailing factors, an injunction is to be preferred. However, the converse is the case if the social welfare costs arising from the termination of the unlawful activity exceed the social welfare benefits, unless the costs of negotiating a release from the injunction are relatively small (this is typically not the case in a multi-party situation). Secondly, courts should take into account the implications that decisions have beyond the case which is the subject of the decision. This is particularly important where decisions create incentives (or disincentives) for investment ex ante, and therefore on productive economic activity, as well as for taking care ex ante. Thirdly, from the perspective of the optimal timing of legal intervention, there are other significant considerations which ought to be taken into account. These include whether the defendant is judgment proof and the costs of monitoring the defendant's behaviour.



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