ON THE RATIONALE FOR PENALTY DEFAULT RULES*

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I. INTRODUCTION

The legal literature on default rules studies which fall-back provisions the law *does* or *should* prescribe if a contract fails to specify parties' obligations fully in some contingency that arises. The "does" question is an empirical matter about which I have nothing to say. I will instead concentrate on the "should" question, specifically, on whether there is a theoretical rationale for so-called penalty default rules.

Since Ian Ayres and Robert Gertner's 1989 *Yale Law Journal* article,[1] penalty default rules—which intentionally specify outcomes that the contracting parties do *not* want—have attained some prominence. Yet, I shall argue that Ayres and Gertner's analysis of penalty

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1. Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989).

defaults is flawed. These authors devise a model in which the justification offered for a penalty default is to induce one contracting party to reveal socially valuable information that, with transaction costs, she would supposedly keep to herself under a "nonpenalty" default rule. But I will show that, given the authors' assumption that the pertinent transaction cost is that of "contracting around the default rule," the party in question has the incentive to divulge the critical information even under the nonpenalty rule. I conclude that the Ayres-Gertner rationale for penalty default is logically in error (The same is not true in the alternative model of Lucian Bebchuk and Steven Shavell, [2] for whom it is *communication between parties* that is assumed to be costly.)

In my discussion, I will limit attention, following Ayres and Gertner, to private contracts between a buyer and a seller in a model based on the well-known case of *Hadley v. Baxendale*.[3] Of course, the issue of default rules potentially arises in many other settings too; for example, John Ferejohn and Barry Friedman argue that a political constitution provides the default positions for legislation.[4] But

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2 Lucian Bebchuk & Steven Shavell, *Information and the Scope of Liability for Breach of Contract*, 7 J.L. Econ. & Org. 284 (1991)

3. 156 Eng. Rep. 145 (Ex. 1854).

4. John Ferejohn & Barry Friedman, *Toward a Political Theory of Constitutional Default Rules*, 33 FLA. ST. U. LAW REV. __ (2005)

since my particular criticisms pertain to Ayres and Gertner's *Hadley* set-up, I will focus on that.

II. *HADLEY V. BAXENDALE*

Suppose that a buyer demands a service of a seller.[5] Assume that the magnitude of the buyer's prospective benefit from the service is B, but that B is, at least at first, *private* information (that is, it is known to the buyer but not the seller). More specifically, suppose that, from the seller's point of view, B is either "normal" (that is, equal to some particular value B_N)—and that the normal possibility occurs with probability q (again, from the seller's perspective)—or else, with probability $1-q$, B is "supernormal" (i.e., $B = B_S > B_N$).

Assume that, even if the seller agrees to provide the service, there is some risk that he will not succeed in doing so. This risk can be reduced (but not eliminated) by the seller's taking "care." If the seller incurs cost e of care (or effort), then $\pi(e)$ is the probability of successful provision, where π is an increasing function of e (the higher the seller's expenditure on care, the higher the probability of success).

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5. In *Hadley*, a miller (the buyer) wished to have a carrier (the seller) transport a broken crankshaft so that it could be repaired. *Hadley*, 156 Eng. Rep. at 145.

Like Ayres and Gertner,[6] I will suppose that e is *not verifiable* (that is, that there is no way to prove to a third party—for example, a court—what level of effort the seller has chosen), which implies that the level will be up to the seller to choose. But given e's nonverifiability, the question arises: How can the seller be induced to take proper care? After all, were provision to be unsuccessful, the seller could always claim that he took proper care and was just unlucky. One standard device from both theory and practice for inducing the right level of effort is to make the seller at least partially *liable* for the buyer's lost benefit if provision fails.

But what if the contract neglects to specify the extent of the seller's liability? Most of the literature on *Hadley* has considered two possible liability rules as defaults. One is to make the seller liable for the buyer's "normal" loss B_N in case provision fails (indeed, this is often called the "*Hadley* rule," since in the original case the court awarded only normal damages). Because provision fails with probability $1-\pi(e)$, the seller's net expected payoff under this rule is

6. Ayres and Gertner write that the "[seller's] precaution decision cannot be contracted upon because of the prohibitive costs of verifying the reliance investment." Ian Ayres & Robert Gertner, *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 YALE L.J. 729, 767 (1992)

(1) $p - B_N\left(1-\pi\left(e\right)\right) - e$,[7]

if the contract specifies a fixed price p for the service. (For convenience, I suppose that the buyer pays the seller this price whether or not provision is successful.) Thus, if the contract is silent on liability, the seller will presumably choose e to maximize (1). I will denote this maximizing choice by e_N .

The other rule is to make the seller liable for the full loss B, whatever it turns out to be. The expected value of the loss is

$$qB_N\left(1-\pi\left(e\right)\right)+\left(1-q\right)B_S\left(1-\pi\left(e\right)\right),$$

and so, again assuming no liability provision in the contract and a fixed price p, the seller in this case will choose e to maximize the net payoff:

(2) $p - qB_N\left(1-\pi\left(e\right)\right) - \left(1-q\right)B_S\left(1-\pi\left(e\right)\right) - e.$

I will let e^* denote the maximizing choice in (2). Notice that, for this full-damages rule to be operational, there must be some way for a court to assess the magnitude of B. That is, even though we are as-

7. I suppose throughout that the seller is risk neutral.

suming that B is private information *ex ante*, B must be verifiable *ex post*.[8]

For either liability rule, the corresponding choice of e above is generally *inefficient*. For efficiency, the choice of e should be geared to the buyer's *actual* loss B: the expected gross benefit from a particular choice of e is $B\pi(e)$ and the cost is e. Hence, e should be chosen to maximize

(3) $B\pi(e)-e$.

The choice of e maximizing (3) differs from e^* and, if $B = B_S$, also from e_N (for $B = B_S$, let the maximizing choice of e in (3) be e_S).

One way (but, as we will see, not the only way) parties can try to overcome these inefficiencies is to "override" or "contract around" the default in their contract. Indeed, Ayres and Gertner claim (correctly, in my view) that, when the transaction costs of designing, writing and executing contracts are zero, *both* default liability rules lead to efficiency.[9] Therefore, as they do,[10] let me introduce a strictly positive fixed cost c of *overriding the default rule*; this cost might be thought

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8. Ayres and Gertner get at this point when they write: "We assume that it is costless for the court to determine the valuations ex post, even though it is prohibitively expensive prior to a breach." Ayres & Gertner, *supra* note 5, at 770.

9. This is just a variant of the Coase theorem; see Ronald Coase, "The Problem of Social Cost," The Journal of Law and Econ., (1960)

of as the expense of drafting the efficient contractual provision that replaces the default. Ayres and Gertner claim that, with such a cost, it is quite possible that the normal-damages rule but not the full-damages default will lead to efficiency. Because normal damages are not "consistent with what fully informed parties would have wanted"—if the seller knows the value of *B*, it is more efficient for him to be fully liable for its loss—they call the normal-damages rule a *penalty default*. Hence, they conclude that a penalty default may be desirable. I argue, however, that their claim is incorrect, that is, that, for the transaction cost and circumstances they consider, the full-damages default will *also* generate efficiency .

First consider the normal-damages default rule. If not overridden, this rule will induce $e = e_N$. Thus if $B = B_N$, no overriding is needed to attain efficiency. Like Ayres and Gertner, I will suppose that the buyer can make take-it-or-leave-it offer to the seller. Hence, when $B = B_N$ price p_N will satisfy

(4) $p_N = B_N\left(1-\pi\left(e_N\right)\right)+e_N$,

provided the seller's best alternative payoff is 0.

Assume next that $B = B_S$ —so that overriding *is* called for. To override the default, the buyer can announce that $B = B_S$, and the

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[10] See p. 108, Ayres & Gertner 1989.

contract can make the seller liable for that level of damages. In exchange, the price he receives will be

(5) $p_S = B_S\left(1-\pi\left(e_S\right)\right)+e_S$.

Observe that the seller will agree to this contract because, as when $B = B_N$, his payoff is zero. As for the buyer, note that as long as the inequality

(6) $B_S - p_S - c = \pi\left(e_S\right)B_S - e_S - c$

$$\geq \pi\left(e_N\right)B_S + \left(1-\pi\left(e_N\right)\right)B_N - p_N = \pi\left(e_N\right)B_S - e_N$$

holds, she has the incentive to make the announcement and incur the cost *c* of overriding the default rule in the contract. That is, if (6) holds, we can expect an efficient outcome.

But Ayres and Gertner maintain that, even if (6) holds (so that the normal-damages rule leads to efficiency), the parties' contract under the *full*-damages rule will quite possibly be inefficient.[11] Recall that, if the seller does not know the value of *B*, then he will choose $e = e^*$ and so will be willing to provide the service for the price

(7) $p^* = q\left(1-\pi\left(e^*\right)\right)B_N + \left(1-q\right)\left(1-\pi\left(e^*\right)\right)B_S + e^*$.

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[11] "Low-damage millers [normal-damage buyers] might fail to contract around a default that awarded unforeseeable [full] damage while high-damage millers [supernormal-damage] buyers will contract around the *Hadley* [normal-damages] rule" (p. 102 Ayres & Gertner 1989).

The Ayres-Gertner claim is that, under full-damages liability, the parties could well opt for a contract in which the seller is paid p^* and chooses $e = e^*$ *regardless* of the buyer's true B (that is, the contract entails *pooling*), a clearly inefficient outcome.

To review the argument behind the claim, notice that, if $B = B_N$, the buyer could, in principle, attempt to improve efficiency by proposing an alternative contract in which liability is limited to normal damages and the price is set at the lower level p_N rather than p^*. However, if q is near enough 1, then the difference between p^* and p_N will be less than c, the cost of overriding the full-damages liability rule. Thus, in that case, the buyer's net gain from the alternative contract is negative, and so she will not propose it. Furthermore, if $B = B_S$, then even when (6) holds, the buyer has a strong reason to hide the value of B: by revealing his potential damages, he will merely drive the price up to p_S without any compensating benefit (since, under full-damages liability, he gets B_S regardless of whether the service is actually provided). Hence, according to the argument, parties cannot avoid an inefficient pooling contract under full-damages liability, when q is near enough 1.

But this logic overlooks a superior contract that the parties could agree to instead. Notice that, even under the pooling contract,

the seller would clearly profit from knowing the value of B, because he could then adjust e accordingly. Indeed, with this information, he would still break even were the price reduced by some amount Δ. Furthermore, the buyer would be perfectly happy to divulge the information, because, given full-damages liability, she would continue to get her full benefit B. Hence, instead of the pooling contract, the parties would be better off signing a contract according to which (i) the seller is paid $p^* - \Delta$ and (ii) the buyer divulges the value of B.[12] Clearly, this alternative contract attains efficiency (and Pareto dominates the pooling contract). Moreover, *it does not require overriding the* (full-damages) *default*, and therefore does not incur cost c. Thus, rational parties will presumably choose this alternative in preference to the pooling contract above, thereby generating an efficient outcome.

III. CONCLUSION

Ayres and Gertner claim that a penalty-default rule (normal-damages liability) may be preferable in their buyer-seller model because it induces the buyer to reveal the magnitude of her damages—thereby ensuring efficiency—in circumstances where the cost of over-

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[12] If $B = B_N$, the buyer might contemplate getting an even better price, p_N, by proposing that the seller's liability be limited to normal damages. But notice that according to the

riding the default might interfere with her doing so under full-damages liability. I have argued, however, that Ayres and Gertner have overlooked a better contract, which attains efficiency under full-damages liability without the need for overriding.

This leads me to a broader point. Penalty default theory turns almost entirely on *transaction costs*: in the basic model, the choice of default rule is completely irrelevant without them. There are, of course, many different aspects of transactions that may be costly—contract drafting, communication between parties, contractual complexity, verification of damages, etc. Yet, as I have argued here, comparing default rules may depend critically on which *particular* costs (if any) are important. Unfortunately, empirical work has not advanced anywhere near the point where we have a good understanding of the various costs' absolute or relative magnitudes. Thus, at present, it is difficult to draw any firm conclusions from the theory, and so the normative exercise seems of rather limited value.

Ayres-Gertner assumption, this would involve a prohibitive cost of overriding.