Florida State University Law Review

Volume 33 | Issue 3

Article 3

2006

Ya-Huh: There Are and Should Be Penalty Defaults

Ian Ayres weric@eric.com

Follow this and additional works at: http://ir.law.fsu.edu/lr

Recommended Citation

Ian Ayres, Ya-Huh: There Are and Should Be Penalty Defaults, 33 Fla. St. U. L. Rev. (2006) . http://ir.law.fsu.edu/lr/vol33/iss3/3

This Article is brought to you for free and open access by Scholarship Repository. It has been accepted for inclusion in Florida State University Law Review by an authorized administrator of Scholarship Repository. For more information, please contact bkaplan@law.fsu.edu.

FLORIDA STATE UNIVERSITY LAW REVIEW



YA-HUH: THERE ARE AND SHOULD BE PENALTY DEFAULTS

Ian Ayres

VOLUME 33

 ${\rm SPRING}\ 2006$

NUMBER 3

Recommended citation: Ian Ayres, Ya-Huh: There Are and Should Be Penalty Defaults, 33 FLA. ST. U. L. REV. 589 (2006).

YA-HUH: THERE ARE AND SHOULD BE PENALTY DEFAULTS

IAN AYRES*

INTRODUCTION	589
RESPONDING TO POSNER'S CLAIM	590
A. Default Equivalents	593
B. Plausibility of Penalties	596
C. Other Examples of Existing Penalty Defaults	599
D. What About Hadley?	612
RESPONDING TO MASKIN'S CLAIM	613
CONCLUSION	617
	RESPONDING TO POSNER'S CLAIM A. Default Equivalents B. Plausibility of Penalties C. Other Examples of Existing Penalty Defaults D. What About Hadley? RESPONDING TO MASKIN'S CLAIM

I. INTRODUCTION

In two separate articles, Eric Maskin and Eric Posner attack the positive and normative bases of penalty defaults.¹ Posner claims that there are no penalty defaults in contract law, and Maskin seems to claim that penalty defaults are not efficient.

This response refutes these claims. Posner can only come to his positive assessment by inappropriately carving away at what constitutes a default, what constitutes my model, and what constitutes a penalty default. Maskin's conclusion at most only limits the contexts where penalty defaults are efficient, and his counterexample to the Ayres and Gertner *Hadley* model is premised on an extremely fragile and unrealistic equilibrium concept. While Maskin proves that information-forcing rules are not always optimal, he fails to prove that there are not contexts (that is, parameter values) where information-forcing is still efficient—including the contexts emphasized in Ayres and Gertner's original model.²

Before Ayres and Gertner were published, there was a broad consensus that lawmakers in setting defaults should simply strive to provide the substantive rule that the parties would have set for themselves—the so-called majoritarian default. A major goal of ours was to convince lawmakers that this one-tool toolbox was insufficient. We highlighted the possible efficiency of what we called "penalty," or information-forcing, defaults as a way to dramatize the need for lawmakers to consider a variety of nonmajoritarian bases for default setting.

^{*} William K. Townsend Professor, Yale Law School. Rosemary Carey, Rob Gertner, and Eric Talley provided helpful comments. David Lenzi and Bharat Ramamurti provided excellent research assistance.

^{1.} Eric Maskin, On the Rationale for Penalty Default Rules, 33 FLA. ST. U. L. REV. 557 (2006); Eric A. Posner, There Are No Penalty Default Rules in Contract Law, 33 FLA. ST. U. L. REV. 563 (2006).

^{2.} Ian Ayres & Robert Gertner, Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules, 99 YALE L.J. 87 (1989).

Reading the Maskin and Posner articles, one might get the idea that it would be fine for lawmakers to return to that simpler time when all they had to do was divine the rule that most contractors would want. This is clearly wrong. There is often a plausible horserace between radically different types of defaults, and savvy lawmakers would do well to consider multiple bases for default setting including information-forcing effects.

I will take up the claims of these authors in turn.

II. RESPONDING TO POSNER'S CLAIM

A short answer to Eric might simply be: section 138.04 of the Wisconsin Statutes.³

After all, since Posner's claim is that there are no penalty defaults, it can be refuted simply by producing one counterexample. It just takes one purple frog to refute the claim that all frogs are green.

The Wisconsin statute ordains:

The rate of interest upon the loan or forbearance of any money, goods or things in action shall be \$5 upon the \$100 for one year and according to that rate for a greater or less sum or for a longer or a shorter time; but parties may contract for the payment and receipt of a rate of interest not exceeding the rate allowed in ss. 138.041 to 138.056, 138.09 to 138.12, 218.0101 to 218.0163, or 422.201, in which case such rate shall be clearly expressed in writing.⁴

As parsed by courts, this statute simply means: "Where no other rate is clearly expressed in writing, the interest on obligations runs at the legal rate of five percent per year."⁵

To my mind, this is a particularly striking example of a penalty default, because it is a default price for renting money that stands in stark contrast to the normal price default set out, for example, in section 2-305 of the Uniform Commercial Code (U.C.C.).⁶ Instead of setting a "reasonable price," or setting out a formula for a default price that moves with the market—say prime plus two percent—the Wisconsin Legislature in its wisdom chose a fairly low interest rate that operates as a penalty if lenders fail to adequately disclose the effective interest rate. In all likelihood, lawmakers intended the rule to have an information-forcing effect. Moreover, the efficiency of the default is plausibly defended on the basis of this information-forcing effect.

While this single counterexample is logically sufficient to refute the title of Posner's article, my goal in this Part is to lay out a num-

^{3.} WIS. STAT. ANN. § 138.04 (West, Westlaw through 2005 Act 105).

^{4.} *Id*.

^{5.} Diversified Mgmt. Servs., Inc. v. Slotten, 351 N.W.2d 176, 181 (Wis. Ct. App. 1984).

^{6.} U.C.C. § 2-305 (2005).

ber of plausible candidates. Posner is right that I need not prove that penalty defaults exist in order to argue that they should exist. But still, the descriptive question has normative relevance. Cautious lawmakers considering whether to enact a penalty default on normative grounds can be reassured by the descriptive prevalence of information-forcing rules already in existence in other areas.

Somewhat surprisingly, most of the work in Posner's analysis does not come from his restrictive reading of what constitutes a penalty (although his view is unduly restrictive). Most of the work is done by his restrictive definition of what constitutes a contractual default. Posner forthrightly excludes from analysis:

(1) any rules outside the "general rules of contract law";⁷

- (2) any rules concerning the formation of contracts; and
- (3) any rules concerning the interpretation of contracts.

To Posner, none of these rules are contractual defaults. While finetuned distinctions as to what is or is not contractual, or as to what is or is not a default, might be appropriate in some contexts, they certainly are not appropriate if we want to get a handle on whether lawmakers should or should not consider deploying penalty defaults.

After thus narrowing the list of contractual defaults, Posner then adds a list of criteria for what constitutes a "penalty" consistent with my model—excluding from contention:

- (4) any rule which is justified by information-forcing effect for third parties (including courts);
- (5) at times, any rules that do not force contractors to reveal information about their valuation; and
- (6) at times, any rules that are not intended by the legislature to have an information-forcing effect.⁸

These six exclusionary principles are unduly restrictive.

It is appropriate that I am writing these words for the *Florida* State University Law Review, because in my 1999 Ladd Lecture, *Em*pire or Residue, published in this very law review, I took up the analogous question of how we should define the appropriate domain of the term "contractual":

[W]e should not particularly care whether a field is characterized as contractual—unless something turns on the characterization. Our first response to someone's impassioned suggestion that a par-

^{7.} Posner, *supra* note 1, at 573 n.15.

^{8.} It also seems that he flirts with the idea that only statutes can be defaults. All of his textual examples of defaults are taken from the U.C.C. Posner, *supra* note 1, at 566 (citing a series of "random examples" of default rules in the U.C.C.). But at least implicitly he recognizes that common law judges create default damages. *Id.* at 567-69 (discussing the *Hadley* rule and default damages).

ticular area is or is not contractual should be "Who cares?" or perhaps more precisely "*Why* should we care?"

. . . Essentialist debates about what is contract are not only semantic in the most pejorative sense of the word, but may divert attention from what is really at stake.⁹

In that article, I cautiously adopted a default-centric definition of contracts: "[A]n area of law should be considered contractual if parties can privately reorder a substantial portion of their legal relations."¹⁰ I argued that such a definition was at least for some purposes useful because it focused lawmakers and scholars on certain key transcendent questions—which rules should be displaceable by private action, what should be the content of displaceable rules, and what should be necessary and sufficient conditions for actually displacing displacable rules. Nothing in particular turns on calling the laws default rules. Gertner and I might have just as easily referred to them as displaceable rules.

A central theme of my contract writing is that the choice of displaceable rules is importantly different than the choice of nondisplaceable rules. When private parties by mere formalisms can displace the effect of a rule, the very act of formal displacement can have informational effects that nondisplaceable (that is, mandatory) rules cannot have. Lawmakers should consider these informational effects in choosing among potential defaults. In fact, a central claim of my first article with Rob Gertner is that lawmakers should sometimes choose one displaceable rule instead of another because of the informational impact of the act of displacing.

To my mind, this counsels for a broad definition of "defaults." A broad definition of defaults lets lawmakers and analysts assess whether the choice of a given displaceable rule is best defended on the grounds of its informational impact. It also suggests that whether a legislature intended the rule to have an informationforcing effect should not be of paramount importance. Milton Friedman long ago argued that it is often sufficient for economic actors to act "as if" they had a particular motive.¹¹ It would be silly for Eric Posner to write a piece entitled "There Is No Such Thing as Marginal Cost Pricing," based on the argument that firms intend to set the profit-maximizing price, not to set price equal to marginal cost. But the same is true of penalty defaults. Even without intending to

^{9.} Ian Ayres, Empire or Residue: Competing Visions of the Contractual Canon, 26 FLA. ST. U. L. REV. 897, 898 (1999).

^{10.} Id. at 899.

^{11.} MILTON FRIEDMAN, *The Methodology of Positive Economics*, in ESSAYS IN POSITIVE ECONOMICS 3 passim (1953).

choose an information-forcing rule, competitive processes may drive rulemakers to the right result.¹²

The simple idea that lawmakers—both legislators and common law courts—should consider the informational impact of defaultsetting also counsels for a broad definition of what constitutes the Ayres-Gertner model. At times, Posner unfairly restricts our thesis to the *Hadley v. Baxendale* algebra; that is, to cases where the default pushes contracting parties to reveal information to each other about their valuations. In fact, our article expressly argued that penalty defaults could be justified because of their ability to produce a far wider variety of information—both about the parties themselves and about the law, and to both contractors and third parties (and especially courts). It is wrong headed for Posner to reject examples of penalty default rules that are justified at least in part by their informationforcing effects for third parties or which induce the revelation of types of information other than valuation. But at various points in his article this is exactly what he does.¹³

Let me turn first to a functionalist rehabilitation of some specific defaults discussed in the original Ayres-Gertner article. Notwithstanding Posner's arguments to the contrary, these examples still provide compelling evidence that penalty defaults do exist.

A. Default Equivalents

I have to admit that I am a bit surprised that Posner would propound such a nonfunctionalist definition of what constitutes a default. If something quacks like a duck and walks like a duck, lawand-economics folks tend to think it is a duck. Or put more formally, if the operation of a rule is functionally equivalent to a default, it is both acceptable and advisable to analyze it as a default.

A case in point is Posner's analysis of the zero-quantity default. Posner claims "that the zero-quantity default is not a default rule at all; it is a legal formality."¹⁴ But the operation of this formality is clearly equivalent to that of a default rule. This becomes especially clear if one compares it to the law's treatment of missing price terms. Posner acknowledges that the "reasonable price" rule supplied by

^{12.} See George L. Priest, The Common Law Process and the Selection of Efficient Rules, 6 J. LEGAL STUD. 65, 72-73 (1977). The absence of conscious attempts by lawmakers might be relevant for gauging whether lawmakers have sufficient information or motivation to craft an effective penalty default. See infra Part II.B.

^{13.} See, e.g., Posner, supra note 1, at 572 (conceding that the void-for-indefiniteness rule prompts parties to write more definite contracts, but maintaining that it is nevertheless not a penalty default); *id.* at 584 ("Whatever one thinks of this reasoning, it reflects traditional consumer protection ideas and is not an application of the Ayres and Gertner model.").

^{14.} Id. at 576.

U.C.C. section 2-305¹⁵ is a default rule. Surely the U.C.C. might have created a "reasonable quantity" default in parallel fashion: "The parties if they so intend can conclude a contract for sale even though the [quantity] is not settled. In such a case the [quantity] is a reasonable [quantity] at the time for delivery." But the U.C.C. does not do anything like this. Instead of filling such a contract with a reasonable quantity, U.C.C. courts are much more likely to require the parties to trade exactly zero. There are some potentially subtle substantive differences between the operation of U.C.C. section 2-201 and a simple zero-quantity default.¹⁶ But the bottom line is that it is difficult to find cases where a U.C.C. court imposes a nonzero quantity when there is a pure missing quantity contract.

From a functionalist perspective then, U.C.C. section 2-201 operates in a fashion that is equivalent to a default, and it is a jarringly different kind of default setting from that of price. Quantity and price are the two central terms of any contract. They are the terms that every introductory microeconomics class puts on the vertical and horizontal axes in showing how supply equilibrates with demand. And in contrast to their deep economic symmetry, it remains surprising to see their disparate legal (yes, default) treatment.¹⁷

The notion of equivalence also rebuts Posner's analysis of unilateral mistake. Posner argues that the rule imbedded in the *Restatement (Second) of Contracts* section 153 "is not normally thought of as a default rule because it does not fill a gap in an otherwise valid con-

It is interesting that an early draft of the revised U.C.C. proposed removing the zeroquantity default. See U.C.C. § 2-201(a) (Proposed Revised Draft 1999), available at http://www.law.upenn.edu/bll/ulc/ucc2/ucc2299.htm ("A record is not insufficient merely because it omits a term including a quantity term."). It seems that scholars, realizing that the section was a stark departure from majoritarian analysis, sought to shift to a more majoritarian/"reasonable" gap-filling approach. But the final revision rejected the proposal and retained the zero-quantity default.

17. Posner also claims that "the logic of section 2-201... does not follow their model." Posner, *supra* note 1, at 577. But this is only true if one adopts an extremely cramped view of what constitutes the Ayres-Gertner model. Our article explicitly and repeatedly said that penalty defaults could be set so as to provide more information to third parties including courts: "In contrast to the received wisdom, penalty defaults are purposefully set at what the parties would not want—in order to encourage the parties to reveal information to each other *or to third parties (especially the courts)*." Ayres & Gertner, *supra* note 2, at 91 (emphasis added). The algebraic example of *Hadley v. Baxendale* was never put forward as the beginning and end of all possible penalty default applications.

^{15.} U.C.C. § 2-305(1) (2005).

^{16.} For example under U.C.C. section 2-201, only contracts for goods "for the price of \$500 or more" need to be in writing. *Id.* § 2-201. But if the contract only states a price of less than \$500 per unit and no quantity, then it may not be clear whether any writing is needed. Failing to state a quantity in some circumstances may by itself take the contract out of the statute and might at least allow enforcement of a quantity up to some total price less than \$500. But I have not been able to find any cases taking this approach. It is likely that a U.C.C. court would fail to enforce such an agreement. Under such circumstances, a court—possibly relying for support on U.C.C. section 2-204—is likely to find that there is not "a reasonably certain basis for giving an appropriate remedy." *Id.* § 2-204.

tract^{"18} But again it is easy to restate the rule in a way that is equivalent to a default. To wit: Posner concedes that the implied warranties of merchantability and fitness—imbedded in U.C.C. sections 2-314 and 2-315 respectively—are defaults. But there is no reason that the *Restatement* might not contain an implicit representation on the part of every promisor that they are not aware of any "mistake of the other party as to a basic assumption on which that party is making the contract."¹⁹ If default warranties are possible, why not default representations of fact? Indeed, not only is a default equivalent theoretically possible, it already exists. *Restatement (Second)* section 161, aptly titled "When Non-Disclosure Is Equivalent to an Assertion," already does precisely this.²⁰

Posner might respond that a default representation would not give rise to the consequence of voidability that arises under section 153. At times, he limits the term "default" to only those legal rules that fill gaps in contracts that are otherwise legally enforceable: "The mistake doctrine does not fill a gap in an incomplete contract; it operates on precontractual behavior, preventing the formation of a contract in the first place."²¹

But all penalty defaults "operate on precontractual behavior" because it is the potential contractors' aversion to the default penalty that causes them to change their contractual offers. And Posner is wrong to claim that the only impact of the mistake doctrine is to "prevent[] the formation of a contract in the first place." Another potential impact of the doctrine is to change the price at which the parties contract. The seller in *Laidlaw v. Organ* might still have sold the buyer cotton, but he would have done so at a much higher price if unilateral mistake law had required correction of his mistaken basic assumption.²² Moreover, the impact of the law in preventing contract formation to my mind *is* an example of penalty default in action. The disclosure requirement tends to induce a more efficient separating equilibrium: potential contractors who do not have gains of trade do not contract, and those that do do. This is certainly preferable to a pooling equilibrium where both types of contractors contract.

^{18.} Posner, supra note 1, at 578.

^{19.} RESTATEMENT (SECOND) OF CONTRACTS § 161 (1981). This same argument reveals the penalty default nature of *Restatement (Second) of Contracts* section 20(2), which resolves ambiguous expression of agreement against the contractor who was better placed to know of the ambiguity. *Id.* § 20(2).

^{20.} Id. § 161.

^{21.} Posner, supra note 1, at 578.

^{22.} See Laidlaw v. Organ, 15 U.S. (2 Wheaton) 178, 179 (1817). Steve Shavell has acutely observed that notwithstanding the facial symmetry of the doctrine of unilateral mistake, the law is more willing to impose a default representation on sellers than on buyers. See Lucian Arye Bebchuk & Steven Shavell, *Reconsidering Contractual Liability and the Incentive to Reveal Information*, 15 STAN. L. REV. 1615, 1623-29 (1999).

Finally, the default equivalence idea rebuts Posner's argument that interpretive presumptions like *contra proferentem* are not at times usefully viewed as defaults. I do not want to go to the other extreme and argue that default theory is useful in resolving all or even most interpretation issues. But there is a class of cases where the interpretive ambiguity at issue is similar to an obligational gap in the contract. Or if you prefer, where the ambiguity represents a gap in the contract that the express contract only partially closed.²³ Resolving the ambiguity through an act of interpretation is analogous to filling the obligational gap with a default. Where that act of interpretation is carried out according to a predictable rule, parties will contract around it just as they would a pure statutory default.

In this regard, it is striking that some interpretative rules of construction take as their starting point not the intent of the drafting parties (which would resemble majoritarian gap-filling), but instead the interpretation which is least favorable to the drafter. Such rules are strong evidence that common law lawmakers have long understood the value of information-forcing rules. The contra in contra pro*ferentem* rightly suggests a penalty; the interpretative presumption is not chosen because we think that the most negative interpretation is what the drafter or even the draftee normally wants, but rather because the rule of construction is a stick to force drafters to educate nondrafters. If doubting Thomases need a concrete default equivalent, imagine a U.C.C. or Restatement section that read: "Unless otherwise indicated, the parties to a contract intend that obligational gaps in their agreement be interpreted by the contra proferentem presumption." There are reasonable responses to my interpretation as default argument. But at this point, the debate descends into the Nah-uh, Ya-huh dispute suggested by the title.

B. Plausibility of Penalties

In one sense, it is not even necessary to resolve this descriptive dispute about whether penalty defaults currently exist. Posner is right that the main purpose of our article was to establish the normative claim that penalty defaults in certain circumstances should be used. The article tried to establish a normative "possibility theorem." Since we demonstrated that it is possible for penalty default at times to be efficient, lawmakers in choosing among different defaults should consider information-forcing rules—whether or not they have done so in the past.

But the existence—and indeed prevalence—of penalty defaults are not completely irrelevant to our normative claim. One does not have to

^{23.} For example, in a contract to build a swimming pool, the failure to specify the beginning or ending date or the failure to specify whether a filter will be installed can be viewed as giving rise to a question of interpretation or a question of gap-filling.

be a hardcore believer in survival efficiency²⁴ to believe that the existence of several penalty defaults in the law lends some credence to the idea that penalty defaults are feasible to construct and implement.

But Posner bizarrely stacks the deck against plausibility by arguing that the Ayres and Gertner theory proves too much. Posner claims that if our theory were right, "one would expect all general default rules to be penalty default rules."²⁵ This is absurd. The transaction costs savings of majoritarian default rules are sufficient to insure against any such pathological corner solution.

Posner is on much stronger ground when he, like others, argues that lawmakers lack the requisite information to competently choose defaults.²⁶ I am sympathetic to this argument. In fact, Rob Gertner and I emphasized in our second default article that the optimal rule may turn on subtle underlying parameters that may, as a practical matter, fall beyond lawmakers' ken.²⁷

Nonetheless, I believe that there are certain types of informationforcing in which lawmakers can competently engage. In particular, I think that it is easier for lawmakers to enact information-forcing defaults with regard to the disclosure of legal obligations and rights, rather than the underlying characteristics of the contracting parties themselves. Contractors are complex creatures who come in many different sizes and make decisions on multiple dimensions. Forcing them to reveal their hands can be a tricky business. But lawmakers might more easily ensure that uninformed promisors know what they are contracting for and understand the law—and penalty defaults are a feasible way of inducing the contractor who has better information to educate the less informed, if not about themselves, then at least about the law and the precise terms of the contract.

The "legal information-forcing" rules are most plausible when there is asymmetric information about the content of the law itself. In the face of asymmetric legal information, a straightforward solution is to set the default against the more knowledgeable party. In many contexts, for example, one contractor is a repeat player and the other is not. The repeat player—think retail business or insurance company—is more likely to learn the content of the legal rule than the one-off consumer. The natural response is to establish a default

^{24.} This idea, which was embraced by George Stigler, among others, holds that the survival of a legal rule is prima facie evidence of its efficiency. *See* GEORGE J. STIGLER, THE ECONOMIST AS PREACHER AND OTHER ESSAYS (1982); George J. Stigler, *Law or Economics*?, 35 J.L. & ECON. 455, 459 (1992); *see also* Priest, *supra* note 12.

^{25.} Posner, supra note 1, at 570.

^{26.} Id. at 587-88; see also Alan Schwartz & Robert E. Scott, Contract Theory and the Limits of Contract Law, 113 YALE L.J. 541, 618-19 (2003).

^{27.} Ian Ayres & Robert Gertner, *Majoritarian vs. Minoritarian Defaults*, 51 STAN. L. REV. 1591, 1609 (1999).

that disfavors the repeat player. This, of course, is what the *contra proferentem* rule in insurance is all about—but, as we will soon see, it happens in other contexts as well.

While penalty defaults focused on the content of legal obligations are particularly prevalent, there are also times when defaults *can* feasibly induce disclosure of contractor characteristics. Many times these penalty defaults will be formation defaults that block a legal status unless particularized information about specific dimensions is adequately disclosed. Just as the default quantity is zero unless an alternative quantity is affirmatively disclosed, the default patent rule is noenforcement unless the claims are adequately disclosed. The default business organization rule is that liability is not limited unless certain information (address, number of shares, number of directors) is adequately disclosed. The default rule is that sale of certain classes of stock is prohibited unless certain information is adequately set out in a prospectus. In Connecticut, the Home Improvement Act gives homeowners an option to void any improvement contract that fails to state both the beginning and ending dates of construction.²⁸

A blanket statement against the institutional incompetence of lawmakers to establish information-forcing rules with regard to contractor type pushes toward the conclusion that lawmakers could never competently mandate disclosure. While there is often a debate about whether disclosure laws are effective or advisable,²⁹ these examples make plain that lawmakers think that mandating disclosure is at least feasible as a prerequisite of achieving certain legal statuses.

In the search for penalty or information-forcing defaults, there are two more empirical guideposts that can help us on our way. First, look for defaults where the majority of contractors contract around to a particular alternative, but lawmakers over the years do not re-

^{28.} The Connecticut Statute provides:

No home improvement contract shall be valid or enforceable against an owner unless it: (1) Is in writing, (2) is signed by the owner and the contractor, (3) contains the entire agreement between the owner and the contractor, (4) contains the date of the transaction, (5) contains the name and address of the contractor, (6) contains a notice of the owner's cancellation rights in accordance with the provisions of chapter 740, (7) contains a starting date and completion date, and (8) is entered into by a registered salesman or registered contractor.

CONN. GEN. STAT. ANN. § 20-429(a) (West, Westlaw through 2006 Supp. to General Stat.); *see also* Rizzo Pool Co. v. Del Grosso, 657 A.2d 1087, 1094 (Conn. 1995) (citations omitted) ("Because the requirements of the HIA are mandatory and must be strictly construed, the absence of these dates constitutes a violation of the HIA that renders the contract unenforceable. Thus, the plaintiff is precluded from recovery against the defendants unless the plaintiff can establish that the defendants' invocation of the HIA as the basis for their repudiation of the contract was in bad faith.").

^{29.} For a good summary of this long-standing and ongoing debate, see Devin F. Ryan, Comment, Yet Another Bough on the "Judicial Oak": The Second Circuit Clarifies Inquiry Notice and Its Loss Causation Requirement Under the PSLRA in Lentell v. Merrill Lynch & Co., 79 ST. JOHN'S L. REV. 485, 494 n.61 (2005).

spond by switching the default to the alternative preferred by the majority. Second, look for contexts where the law regulates the informational content of attempts to contract around defaults. Cases in which courts refuse to give effect to attempted opt-outs because the attempts did not adequately disclose either the alternative obligation or information about the underlying contractor's type are strong evidence that an information-forcing impetus is at play. In the examples that follow, pay attention to how often the penalty default rules identified by others are consistent with these two guideposts.

C. Other Examples of Existing Penalty Defaults

The bulk of Posner's analysis is a rehashing of the handful of examples that Gertner and I discussed in our original model. This is not a very satisfying methodology to support the broad claim that there are no penalty defaults. And Posner commendably does go further and asks whether any judges in reported decisions think that they are using penalty defaults. On the face of it the answer is yes. There are a number of opinions where judges think that the result is equivalent to a penalty default.³⁰ Posner is reduced to arguing that these judges do not know what they are saying. Posner insists that his own limited definition of what constitutes a penalty default is appropriate and that these cases are not consistent with his definition.

What Posner does not tell you is that all three of the opinions that he discusses in his text are written by law-and-economics judges. (Yes, it helps our citation rates to have friends in high places.) Judge Easterbrook in *Harnischfeger Corp. v. Harbor Insurance Co.* understood that the *contra proferentem* idea is equivalent to a penalty default (but chose not to apply it).³¹ In contrast, Judge Calabresi, in both *American National Fire Insurance Co. v. Kenealy* and *City of Burlington v. Indemnity Insurance Co. of North America*, adopted default interpretations of insurance contracts that were aimed at deterring insurers from strategically withholding information.³²

^{30.} See, e.g., City of Burlington v. Indem. Ins. Co. of N. Am., 332 F.3d 38 (2d Cir. 2003); Moreau v. Harris County, 158 F.3d 241 (5th Cir. 1998); Am. Nat'l Fire Ins. Co. v. Kenealy, 72 F.3d 264 (2d Cir. 1995).

^{31. 927} F.2d 974, 976 (7th Cir. 1991) ("Perhaps the interpretive principle could be recast as one requiring the insurer to come forth with information in its possession but unknown to the insured." (citing Ayres & Gertner, *supra* note 2)).

^{32.} Calabresi justified his result in part by arguing:

A default rule placing the burden on the insurance company and requiring it to contract out of its duty, explicitly and unequivocally, is one way to achieve the desired clarity.

 $[\]ldots$ It, in effect, prohibits insurers from taking the benefits of agency representation while still strategically withholding information as to what authority the agent actually has \ldots .

Kenealy, 72 F.3d at 268-69.

Posner's response to the *Kenealy* opinion is particularly illustrative of Posner's cramped conception of what constitutes an example of information-forcing. How does Posner respond to Judge Calabresi's embrace of penalty default reasoning? Posner says, "Although the court cited Ayres and Gertner's article, the court did not have any concerns about the insurer having private information about its valuation. . . . Whatever one thinks of this reasoning, it reflects traditional consumer protection ideas and is not an application of the Ayres and Gertner model."33 Here, Posner says, Calabresi's intentional use of a default to reduce asymmetric information about contractual obligation does not count. At this point in his argument, Posner has restricted the acceptable class of examples not just to penalty defaults concerning underlying contractor characteristics, but only characteristics related to the contractors' valuations.³⁴ While it is true that our algebraic *Hadley* model concerned asymmetric information about a buyer's valuation, this *Hadley* model is not the alpha and omega of the Ayres and Gertner theory. The broader theory expressly stated in the article is that penalty defaults could potentially produce useful information about a variety of issues to people both inside and outside of the bargain.

But Posner's argument is not just with me and Gertner and Calabresi and Easterbrook. Posner might have easily looked at the hundreds of law review articles that have explicitly grappled with the idea of penalty or information-forcing defaults.³⁵ (An empirical search limited to lawmakers who explicitly use the phrase "penalty default" is of course unreasonably narrow. After all, not everyone will be familiar with the label, even as they might embrace its theoretical thrust. Scholars are much more likely to know of the neologistic phrase—indeed that is why it should not be surprising that Calabresi and Easterbrook have led the way in its judicial usage.) Even a cursory review of that existing legal scholarship uncovers dozens of scholars who claim that existing laws represent penalty defaults. Here is a lengthy list of assertions in the scholars' own words that penalty or information-forcing defaults currently exist:

^{33.} Posner, *supra* note 1, at 584 (citation omitted).

^{34.} This is also the gist of Posner's attempt to avoid the power of *Burlington*: "Although the court cited the Ayres and Gertner article, like the *Kenealy* court, it relied on a different theory—namely, that insureds do not understand their coverage, and that default rules should reflect the expectations of the insureds rather than the jointly optimal terms." *Id.* at 585. Only by limiting the claims of the Ayres-Gertner theory to the specifics of the Ayres-Gertner algebraic model can Posner conclude that such an information-forcing default is not a valid counter-example to his thesis.

^{35.} A Westlaw search in the "journals and law reviews" database uncovered more than 800 publications that used either "penalty default" or " 'information forcing'/2 (rule default)" or "((ayres ayers) /5 gertner)."

[P]rosecution history estoppel is best viewed as an informationforcing default penalty rule, where the possibility of lost patent scope induces patentees to produce socially valuable information early in the life of the patent.

. . . .

[T]he penalty default rule operates here to encourage crisp and considered drafting of *both* original and amended claims \dots ³⁶

One of the boldest efforts to reconfigure conventional environmental regulation into a penalty default regime was the Department of the Interior's aggressive expansion of [the Habitat Conservation Plan provision of the Endangered Species Act]³⁷

[I]nequitable conduct [claims in patent law] also function[] as a penalty default to discourage applicants from playing strategic games.³⁸

On the other hand, the economic theory of an information-eliciting penalty default accounts for the rule [of *Hadley*] quite nicely.³⁹

[P]enalty default contract rules, like for example the doctrine of foreseeability, may induce a party with a high subjective value on performance to divulge this and, consequently, limit his potential to behave opportunistically.⁴⁰

In its current form, the Statute [of Frauds] essentially establishes a conclusive presumption that transactors do not want legal enforcement of a given agreement unless they produce a writing. In effect, the Statute operates as a penalty default rule that forces parties desiring legal enforcement to contract around the rule by producing a writing that makes clear their intent to form a legal obligation.⁴¹

[C]ourts often employ penalty default rules, such as the rule that courts construe ambiguities against the drafter of a contract.⁴²

[S]ome courts interpret the "definiteness" requirement as a penalty default, designed to force the parties to fill the gaps themselves if they want their contract to be enforceable.⁴³

^{36.} R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of* Festo, 151 U. PA. L. REV. 159, 159, 218-19 (2002) (emphasis omitted).

^{37.} Bradley C. Karkkainen, Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism, 87 MINN. L. REV. 943, 970 (2003).

^{38.} Katherine Nolan-Stevaux, *Inequitable Conduct Claims in the 21st Century: Combating the Plague*, 20 BERKELEY TECH. L.J. 157, 159-60 (2005).

^{39.} Nathan Oman, Unity and Pluralism in Contract Law, 103 MICH. L. REV. 1483, 1504 (2005).

^{40.} Eleni Zervogianni, Remedies for Damage to Property: Money Damages or Restitution in Natura?, 24 INT'L REV. L. & ECON. 525, 527 (2004).

^{41.} Shawn Pompian, Note, *Is the Statute of Frauds Ready for Electronic Contracting?*, 85 VA. L. REV. 1447, 1453 (1999).

^{42.} David M. Driesen & Shubha Ghosh, *The Functions of Transaction Costs: Rethinking Transaction Cost Minimization in a World of Friction*, 47 ARIZ. L. REV. 61, 71-72 (2005).

[S]ome of the employee handbook decisions [in which courts have construed employee handbooks as binding contracts], rather than using classical contractual analysis, create a penalty default rule that forces employers to inform their employees of certain critical information regarding the employment relationship.⁴⁴

[I]t could be argued that conflicts rules are sometimes *penalty de-fault rules*. In transactional settings, for example, rules that prohibit lawyers from concurrently representing clients with adverse interests, even in unrelated matters, are penalty default rules.⁴⁵

Section 10 [of the Endangered Species Act] enforcement has transformed section 9's nominally invariant rule into a "penalty default" rule, a legal baseline intentionally designed to be sufficiently unpleasant to spur affected parties into negotiating more favorable alternatives.⁴⁶

Instead, we predict that [for law firms] the only function of the [general partnership] form [as opposed to the LLC form] in the coming years will be as a penalty default rule that forces parties contemplating the formation of a business or professional enterprise to reveal relevant information to courts and interested third parties.⁴⁷

Default licenses [in copyright] can be analogized to the "penalty defaults" of the type proposed by Ian Ayres and Robert Gertner as gap-filling rules for incomplete contracts.⁴⁸

[T]he dormant Commerce Clause operates as a penalty default rule, reflecting Congress's usual preference but on occasion imposing a penalty default that forces Congress to reveal its real preferences when recommitment to local control would arguably serve national interests.⁴⁹

Chevron deference and *Pennhurst*'s clear-statement rule might therefore be viewed as federalism-based versions of "penalty default rules."⁵⁰

47. Scott Baker & Kimberly D. Krawiec, *The Economics of Limited Liability: An Empirical Study of New York Law Firms*, 2005 U. ILL. L. REV. 107, 149.

49. Jim Chen, A Vision Softly Creeping: Congressional Acquiescence and the Dormant Commerce Clause, 88 MINN. L. REV. 1764, 1792 (2004).

^{43.} Richard Craswell, Offer, Acceptance, and Efficient Reliance, 48 STAN. L. REV. 481, 540 (1996).

^{44.} Rachel Leiser Levy, Comment, Judicial Interpretation of Employee Handbooks: The Creation of a Common Law Information-Eliciting Penalty Default Rule, 72 U. CHI. L. REV. 695, 697 (2005).

^{45.} Richard W. Painter, Advance Waiver of Conflicts, 13 GEO. J. LEGAL ETHICS 289, 293 (2000) (citation omitted).

^{46.} Jim Chen, Legal Mythmaking in a Time of Mass Extinctions: Reconciling Stories of Origins with Human Destiny, 29 HARV. ENVTL. L. REV. 279, 301 (2005).

^{48.} Christopher Sprigman, Reform(aliz)ing Copyright, 57 STAN. L. REV. 485, 556 (2004).

^{50.} David Freeman Engstrom, *Drawing Lines Between* Chevron and Pennhurst: A Functional Analysis of the Spending Power, Federalism, and the Administrative State, 82 TEX. L. REV. 1197, 1237 (2004).

Second, given the potential informational asymmetries between repeat-player trust lawyers and institutional fiduciaries on the one hand, and settlors on the other, there is room as a normative matter for the occasional information-forcing default rule. As a positive matter, such penalty defaults do exist. Perhaps the most salient example concerns clauses that exonerate the trustee from liability to the beneficiaries for breach of trust.⁵¹

Sometimes decrees in public law cases take an in terrorem or punitive form—threatening or, far less often, imposing sanctions in order to induce compliance with other orders. These background sanctions function as a kind of "penalty default"—a result that no one is likely to prefer, intended to induce the parties to negotiate a better one.⁵²

Rather than serving as the vehicle for fully informed agency decision-making, the [Environmental Impact Statement] operates as a penalty-default rule, creating an incentive for agencies to avoid its onerous requirements by upgrading environmental standards at an earlier stage of project design.⁵³

[L]egal ethics rules barring conflicts of interest absent consent by both parties can be considered penalty default rules.⁵⁴

The court [in *IBP*, *Inc. v. Tyson Foods*, *Inc.*] established that Tyson knew about the events that it later claimed gave rise to a [material adverse effect and would thereby trigger a MAC clause in the contract]. Thus, by failing to contract around them, Tyson implicitly bore the risks associated with those events. This "penalty default rule" produces efficient results because it forces the buyer either to take precaution or reveal the risk to the other party and pay him to assume it.⁵⁵

The court's "penalty" default rule induces an employer who would find assignment valuable to negotiate for an express assignment provision in exchange for the proper compensation. This rule will at least bring the issue to the employee's attention, somewhat reducing the information asymmetry and enhancing the contract's total value.⁵⁶

^{51.} Robert H. Sitkoff, An Agency Costs Theory of Trust Law, 89 CORNELL L. REV. 621, 644-45 (2004) (citation omitted).

^{52.} Charles F. Sabel & William H. Simon, *Destabilization Rights: How Public Law Litigation Succeeds*, 117 HARV. L. REV. 1015, 1067 (2004) (citation omitted).

^{53.} Bradley C. Karkkainen, Whither NEPA?, 12 N.Y.U. ENVTL. L.J. 333, 349 (2004).

^{54.} Scott R. Peppet, Contractarian Economics and Mediation Ethics: The Case for Customizing Neutrality Through Contingent Fee Mediation, 82 TEX. L. REV. 227, 236 (2003).

^{55.} Jonathon M. Grech, Comment, "Opting Out": Defining the Material Adverse Change Clause in a Volatile Economy, 52 EMORY L.J. 1483, 1513 (2003) (citations omitted) (internal quotations omitted).

^{56.} Comment, Pennsylvania Supreme Court Holds That Covenants Not to Compete Are Not Assignable by Default and Are Not Enforceable to Protect Financial Interests Alone, 116 HARV. L. REV. 2238, 2245 (2003).

[T]he WIPO Copyright Treaty's protections for traditional sovereignty interact to create a potential nonenforcement default for the Treaty's protections of digitally transmitted material in signatory states where protections are most needed. The result is a penalty default for copyright-profiting states.⁵⁷

Boucicault v. Fox seems to have imposed a penalty default, as the court explained that it expected employers to contract expressly for copyright ownership when they deemed it possible and desirable.⁵⁸

[T]he European Union set a sort of "penalty default" of interoperability in its 1991 Software Directive. That directive provides that if a copyright owner in a computer program does not make interface information "readily available," others are permitted to reverse engineer the program to obtain that information.⁵⁹

The Directive [on European Works Councils] operates, then, through a "penalty default" rule, in other words, a fallback provision that induces a more powerfully-placed or better-informed party (here, the employer) to enter into a bargaining process when it otherwise would lack an incentive to do so.⁶⁰

[The Revised Uniform Arbitration Act of 2000] permits arbitrators to order such remedies as the arbitrator considers just and appropriate under the circumstances and specifies that a court may not vacate or refuse to confirm an award because a remedy granted by an arbitrator could not or would not be granted by the court in a civil action. This provision makes possible extra-legal arbitral powers. Although a default provision, it seems more a "penalty" default than "majoritarian;" one intended to compel the parties to clarify the arbitrator's remedial authority.⁶¹

While determining plain language in an electronic contract may create interpretive difficulty for a trial court, the current allocation [of risk of loss under U.C.C. Section 2-509] operates as a "penalty default" rule favoring sellers.⁶²

[I]t is possible to understand the general partnership as a "penalty default." That is, many, if not most, organizers of business firms may prefer characteristics that cannot be achieved through a gen-

^{57.} Mary De Ming Fan, Governing Copyright in Cyberspace: The Penalty Default Problem with State-Centric Sovereignty, 43 JURIMETRICS J. 315, 317 (2003).

^{58.} Catherine L. Fisk, *Authors at Work: The Origins of the Work-for-Hire Doctrine*, 15 YALE J.L. & HUMAN. 1, 54-55 (2003).

^{59.} Mark A. Lemley, Intellectual Property Rights and Standard-Setting Organizations, 90 CAL. L. REV. 1889, 1962 n.305 (2002).

^{60.} Catherine Barnard & Simon Deakin, 'Negative' and 'Positive' Harmonization of Labor Law in the European Union, 8 COLUM. J. EUR. L. 389, 410-11 (2002).

^{61.} Stephen L. Hayford & Alan R. Palmiter, *Arbitration Federalism: A State Role in Commercial Arbitration*, 54 FLA. L. REV. 175, 215 (2002) (citations and internal quotations omitted).

^{62.} Seth Gardenswartz, *The Risk of Loss in Electronic Transactions: Vintage Law for 21st Century Consumers*, 6 VA. J.L. & TECH. 15, 56 (2001) (citations omitted), *available at* http://www.vjolt.net/vol6/issue3/v6i3-a15-Gardenswartz.html.

eral partnership; the structure of general partnership law creates incentives to choose other organizational forms.⁶³

For example, Model Rule 1.7, which prohibits lawyers from concurrently representing clients with adverse interests, even in unrelated matters, is arguably a penalty default rule for transactional lawyers who routinely seek, and are routinely granted, permission to represent another client on the opposite side of a deal from a client whom they represent in other matters.⁶⁴

The rule of strict liability seeks to correct for the unequal information between the bailor and bailee about the risk of transfer to a third party. Strict liability here serves to protect the bailor much in the way a penalty default rule protects the informationally disadvantaged party in the law of contracts.⁶⁵

Limited liability functions as a bargain-forcing rule in this context. If the creditor does not protect itself by extracting a personal guarantee from the shareholder, it is penalized by having its recovery limited to the corporation's assets. To be sure, the penalty is one-sided. One-sided penalty defaults, however, are appropriate where the parties to the contract have asymmetrical information because they force the better-informed party to disclose information.⁶⁶

Allocating the risk of loss to the employee [who knowingly fails to disclose past wrongdoing when he is hired] has an added benefit it encourages the disclosure of information. It does this by acting as a penalty default term to employees. Penalty default terms encourage the disclosure of information by providing a strong incentive to at least one of the parties to negotiate around the default term.⁶⁷

The Court sometimes uses what is called a rule of clear statement, which holds that if Congress intended a certain result, it should have said so more clearly in the statute. This rule is said to be similar to the penalty default in Contract Law. A penalty default is a judicial construction of a contract that is unfavorable to the drafter in order to create an incentive for the drafter, and other similarly situated drafters, to make more clear the legal relationship that the contract actually creates.⁶⁸

^{63.} Deborah A. DeMott, *Transatlantic Perspectives on Partnership Law: Risk and Instability*, 26 J. CORP. L. 879, 892 (2001) (citation omitted).

^{64.} Richard W. Painter, *Rules Lawyers Play By*, 76 N.Y.U. L. REV. 665, 686 (2001) (citation omitted).

^{65.} Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 816 (2001).

^{66.} Stephen M. Bainbridge, *Abolishing Veil Piercing*, 26 J. CORP. L. 479, 502-03 (2001) (citation omitted).

^{67.} Strider L. Dickson, *Recent Decisions*, 60 MD. L. REV. 886, 906-07 (2001) (citations omitted).

^{68.} Alan Schwartz, *The New Textualism and the Rule of Law Subtext in the Supreme Court's Bankruptcy Jurisprudence*, 45 N.Y.L. SCH. L. REV. 149, 158 (2001) (citation omitted).

The [rule permitting] consultants to retain ownership of inventions . . . serves as a penalty default. The notion here is that since employers are in a better position to know whether a consultant's planned R&D is likely to produce inventions highly complementary to the firm's pre-existing assets, the burden ought to be on the employer to disclose this information to the consultant ex ante.⁶⁹

The foundational rule [of the Fourth Amendment's protection] is a property rule because rightsholders are permitted to consent to government searches, that is, to waive their right. This property rule is enforced via the mechanism of the exclusionary rule, which can be viewed as a penalty-default rule imposed on the government for engaging in unconsented searches.⁷⁰

The cost to transactors of specifying time frames for important aspects of contractual performance in the boilerplate on their confirmations is quite low and might, in fact, be the type of practice we want to encourage through a "penalty default" type of incentive.⁷¹

The presumption that local governments can serve federal interests serves a third purpose: it acts as a "penalty default," giving state legislatures an incentive to resolve political disputes about the costs of local action.⁷²

Being parsimonious [as a judge when gap-filling in contract law] will sometimes mean refusing to give any legal effect to the agreement because of its failure of specificity. This can be justified as a "penalty default" which gives subsequent contracting parties an incentive to be specific and complete.⁷³

A presumption of contractual intent is a default rule for deciding which issues fall within the scope of an otherwise unspecific arbitration clause. Whether understood as a majoritarian or penalty default, it is selected to effectuate or elicit the preferences of contracting parties.⁷⁴

Often, so-called [environmental regulation] standards may serve as threat points in negotiation or as penalty defaults that force information disclosure. 75

^{69.} Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1, 36-37 (1999) (citation omitted).

^{70.} Thomas W. Merrill, *The Constitution and the Cathedral: Prohibiting, Purchasing, and Possibly Condemning Tobacco Advertising*, 93 NW. U. L. REV. 1143, 1164 (1999) (citations omitted).

^{71.} Lisa Bernstein, The Questionable Empirical Basis of Article 2's Incorporation Strategy: A Preliminary Study, 66 U. CHI. L. REV. 710, 777-78 (1999).

^{72.} Roderick M. Hills, Jr., Dissecting the State: The Use of Federal Law to Free State and Local Officials from State Legislatures' Control, 97 MICH. L. REV. 1201, 1279 (1999).

^{73.} Scott FitzGibbon, *Fiduciary Relationships Are Not Contracts*, 82 MARQ. L. REV. 303, 335 (1999) (citation omitted).

^{74.} Steven Walt, Decision by Division: The Contractarian Structure of Commercial Arbitration, 51 RUTGERS L. REV. 369, 401 (1999).

^{75.} Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 HARV. ENVTL. L. REV. 297, 315 (1999).

In short, trust law establishes here a "penalty default"—that is, a default rule of liability for the Manager that is generally inefficient, but that gives the Manager an incentive to reverse the rule by revealing clearly to third parties that she is, in fact, just a Manager and that the third parties may turn only to designated Managed Property for their security.⁷⁶

This "market contrarian" approach, as we shall call it, requires lawmakers to assign the entitlement to the party who values it *less*, thus forcing the higher-valuing party to share the cooperative surplus—which can be created only through a trade—with the lower-valuing party. . . . This approach seems to us to be a property-law equivalent of the argument in favor of penalty default rules in contract law.⁷⁷

There are several aspects of debt financing that suggest the relevance of a penalty default analysis.⁷⁸

The Supreme Court [in *Mastrobuono v. Shearson Lehman Hutton, Inc.*] chose to apply a penalty default rule against the drafter of the contract, thereby removing any advantage the drafter may have had as the more knowledgeable party.⁷⁹

[Ayres and Gertner's] logic may apply to justify the use of a penalty default in choice of law cases—it is more expensive for a court to attempt to fill gaps concerning proper law than it is for parties to contract affirmatively for the law they want.⁸⁰

If purchasers expect copyright to apply to the data they purchase and fail to notice the use restriction, they may pay too much for the product. A penalty default of nonenforcement would correct this market imperfection of asymmetric information by encouraging sellers to disclose information. The use restriction would generally be enforceable if the seller brought it to the purchaser's attention.⁸¹

^{76.} Henry Hansmann & Ugo Mattei, *The Functions of Trust Law: A Comparative Le*gal and Economic Analysis, 73 N.Y.U. L. REV. 434, 461 (1998) (citation omitted).

^{77.} Russell B. Korobkin & Thomas S. Ulen, *Efficiency and Equity: What Can Be Gained by Combining Coase and Rawls?*, 73 WASH. L. REV. 329, 339 & n.34 (1998).

^{78.} Frederick W. Lambert, *Path Dependent Inefficiency in the Corporate Contract: The Uncertain Case with Less Certain Implications*, 23 DEL. J. CORP. L. 1077, 1130 (1998).

^{79.} Stuart I. Silverman, Punitive Damages Awards in Commercial Arbitrations: The Role of Federal Substantive Law in Deriving Contractual Intent, 102 COM. L.J. 306, 321 n.81 (1997).

^{80.} Michael Whincop & Mary Keyes, *Putting the 'Private' Back into Private International Law: Default Rules and the Proper Law of the Contract*, 21 MELB. U. L. REV. 515, 531 (1997).

^{81.} Maureen A. O'Rourke, Copyright Preemption After the ProCD Case: A Market-Based Approach, 12 BERKELEY TECH. L.J. 53, 85 (1997).

[A] presumption of enforceability [under Section 90] is an efficient default rule because it is an "information-forcing" default rule of the sort that was later identified by Ian Ayres and Robert Gertner.⁸²

The Alaska statute provides default rules that should ensure treatment as a partnership for federal tax purposes, but a converting business organization may want to contract around certain of the default provisions of the Alaska statute that seem to be penalty default rules. For example, Alaska Statute section 10.50.290 provides for per capita distribution of profits and losses. In instances where members have widely different interests in an LLC, this rule may be unpalatable for minority owners who would not want per capita distribution of losses and majority owners who would not want per capita distribution of gains.⁸³

Minimalist double jeopardy doctrine [under *Blockburger*] creates a similar sort of information-forcing penalty default for the defendant aware of uncharged criminal liability and dissatisfied with the standard formal and informal guarantees. To obtain maximum formal protection, he will have to identify himself as a high-value defendant to all potentially concerned prosecutors.⁸⁴

For some offers, the actual risk of revocation is lower than the market average and the extra delay is unnecessary; for others, the risk is higher than average and the delay is insufficient. The problem is asymmetric information, and the proper response may be an information-forcing rule—what Ayres and Gertner have labeled a "penalty default." By holding liable the party with superior information, the law can provide an incentive for disclosure. Other things being equal, this is an efficient rule because it encourages reliance decisions to be made on the best information possible.⁸⁵

The warning requirement [to web users that a given ISP will disclose their activities] is information forcing in that the more sophisticated party—here, the system operator—must tell the less sophisticated party—here, the user—about the background legal rule in order for that rule to go into effect.⁸⁶

If the broad waiver of fiduciary duties is part of the original agreement creating the trust, the court may avoid the trust as inchoate, because the agreement is not sufficiently instructive to the fiduciary. The trust will be dissolved, and the assets will revert to

^{82.} Sidney W. DeLong, *The New Requirement of Enforcement Reliance in Commercial Promissory Estoppel: Section 90 as Catch-22*, 1997 WIS. L. REV. 943, 990 (citation omitted).

^{83.} Katherine Quigley, Note, *Converting to a Limited Liability Company: Considerations for Alaska Business Organizations*, 13 ALASKA L. REV. 289, 292 (1996) (citations omitted).

^{84.} Daniel C. Richman, *Bargaining About Future Jeopardy*, 49 VAND. L. REV. 1181, 1204 (1996) (citation omitted).

^{85.} Avery Katz, When Should an Offer Stick? The Economics of Promissory Estoppel in Preliminary Negotiations, 105 YALE L.J. 1249, 1290 (1996).

^{86.} Keith Sharfman, Regulating Cyberactivity Disclosures: A Contractarian Approach, 1996 U. CHI. LEGAL F. 639, 649.

the estate of the trustor. . . Facially, this example can be explained by the theory of penalty default rules in which the courts penalize parties for failing to specify terms of their agreements when the costs of such specification are far below the costs to the courts of determining the terms *ex post facto*.⁸⁷

Much as warranty contracts can convey information to consumers, [original equipment makers, or] OEMs can reveal information about aftermarket costs to consumers via aftermarket supply contracts. Professors Ian Ayres and Robert Gertner have argued that contract default rules should be chosen so as to "penalize" the more informed party, thus inducing that party to reveal its information in contract bargaining and formation. This theory, as applied to the problem of aftermarket costs, resembles a penalty default for OEMs: firms can avoid the penalty by revealing the types of information that concerned the *Kodak* Court, such as life-cycle price information, in aftermarket supply contracts. An exemption from antitrust liability under *Kodak* for OEMs that offer aftermarket supply contracts creates incentives for disclosure of information that helps both consumers and courts.⁸⁸

In a sense, [the] *Van Gorkom* [requirement of a paper trail] imposes a penalty default rule: managers must memorialize their actions, especially in such extraordinary transactions as takeovers, or they will lose the protection of the business judgment rule. The economic rationale behind such a rule is that it will be cheaper for managers to memorialize their actions than to try to reconstruct their actions during a later trial.⁸⁹

Penalty default rules purposely impose a result that the contracting parties would not want in order to give at least one party an incentive to contract around the default rule and select the contract provision they prefer. If, for example, parties contracting for goods do not specify quantity, the Uniform Commercial Code mandates a penalty default by refusing to enforce the contract. In a voluntary whistleblowing regime, lawyers could avoid the penalty default (Rule D, for example) by choosing and advertising another whistleblowing rule.⁹⁰

Alternatively, in the situation where the bank is weak and the borrower strong, [the] D'Oench [doctrine, which estops borrowers from asserting secret side agreements when the FDIC seeks to col-

^{87.} Tamar Frankel, *Fiduciary Duties as Default Rules*, 74 OR. L. REV. 1209, 1248 & n.109 (1995).

^{88.} Salil Kumar, Comment, Parts and Service Included: An Information-Centered Approach to Kodak and the Problem of Aftermarket Monopolies, 62 U. CHI. L. REV. 1521, 1539-40 (1995) (citations omitted).

^{89.} Manuel A. Utset, *Towards a Bargaining Theory of the Firm*, 80 CORNELL L. REV. 540, 595 (1995) (citations omitted).

^{90.} Richard W. Painter, *Toward a Market for Lawyer Disclosure Services: In Search of Optimal Whistleblowing Rules*, 63 GEO. WASH. L. REV. 221, 257 n.131 (1995) (citations omitted).

lect on notes acquired from a failed bank] serves as a penalty default rule which induces the borrower to reveal to the bank what underlying terms and conditions are material. This helps to protect the bank from later litigation by a powerful borrower who acted strategically during the original loan negotiation.⁹¹

Adopting a conventionalist default rule that reflects the commonsense expectation of the community of discourse of which the rationally ignorant party is a member would reduce the instances of this sort of subjective disagreement. Such a rule functions as a penalty default, creating an incentive for the rationally informed party to express a preference for the term that deviates from this common sense. In this way, the rationally informed party is induced to inform by its bargaining behavior the rationally ignorant party of the terms of their agreement and reduce the incidence of subjective disagreement.⁹²

The traditional [reasonable certainty] rule [for calculating lost profits in awarding damages for breach of contract], by purpose-fully denying compensation for a new business' lost profits, acts as such a penalty default.⁹³

By pretending to have a penalty default rule of denying probate to unattested wills, we encourage people to use witnesses. A penalty default is one that is contrary to what the person would intend, but may nonetheless foster efficient behavior.⁹⁴

"Penalty default rules" are strategically designed to encourage at least one of the parties expressly to contract around the default rule, thereby revealing information to the other party or to third parties. In the present context, a rule providing that the promisor is not responsible for the object's conformity to special purpose unless she is informed thereof will encourage the promisee to provide her with this information. In fact, under most legal systems the risk of nonconformity to special purposes is borne by the promisee unless she has notified the promisor of her needs.⁹⁵

But even if manufacturers had some information that their insurers did not, it is not clear that that would have led to adverse selection. Low-risk insureds would have a strong incentive to disclose that information to insureds to prove that they were in fact low-risk insureds. Their alternative would be to withhold informa-

^{91.} Ira Blumberg, Borrower Prepare: D'Oench Maps the Escape from the Dungeon of Duhme, 14 ANN. REV. BANKING L. 269, 282 (1995) (citation omitted).

^{92.} Randy E. Barnett, The Sound of Silence: Default Rules and Contractual Consent, 78 VA. L. REV. 821, 888-89 (1992).

^{93.} Doug Carleton, Note, Averting the New Business' Battle to Prove Lost Profits: A Reintroduction of the Traditional Reasonable Certainty Rule as Penalty Default, 67 S. CAL. L. REV. 1573, 1592 (1994).

^{94.} James Lindgren, *The Fall of Formalism*, 55 ALB. L. REV. 1009, 1026 (1992) (citations omitted).

^{95.} Eyal Zamir, Toward a General Concept of Conformity in the Performance of Contracts, 52 LA. L. REV. 1, 73-74 (1991) (citations omitted).

tion and pay the pool rate. Hence, insurance pricing may act as a "penalty default," through which information is passed to insurers, because good risks disclose while bad risks do not, and insurers can thereby measure or infer each insured's relative riskiness.⁹⁶

It has been argued that refusing to enforce corporate charters that have not complied with formalities forces incorporators to disclose such facts as the number of authorized shares, the registered address of the corporation, and the state of incorporation. In effect, personal liability in this situation is a "penalty" default intended to force disclosure by the more informed party.⁹⁷

Under my approach, the normal default rules of fiduciary duty would generally govern *unless* the parties have clearly opted out by a valid charter provision that is sufficiently transaction specific that investors can appraise its impact. This approach is deliberately coercive in that it compels those possessing discretion or private information to contract around the default rule and in so doing to reveal their actual intentions.⁹⁸

Phew! That's a lot of purple frogs. In keeping with the playground spirit of the title, Eric, why don't you and they fight?

And while you're at it, consider your father's decision in Market Street Associates Ltd. Partnership v. Frey.⁹⁹ In that case, plaintiffs had leased property from General Electric (GE) and later sought specific performance of a provision in the lease-paragraph 34whereby they were entitled to purchase the property in the event that GE refused to consider financing for improvements.¹⁰⁰ The facts make clear that GE's representatives did not recall this provision when they refused to consider financing, that plaintiffs did not refresh GE's memory and that the result was a buy-back option at a below-market price that caught GE by surprise.¹⁰¹ The District Court granted summary judgment for the plaintiff/lessee,¹⁰² presumably reasoning that GE was bound by the terms of the contract it signed, the absence of a reminder notwithstanding. But Judge Posner reversed and remanded.¹⁰³ The gravamen of his decision was the possibility that the plaintiffs had "tried to trick [GE by not reminding them of the provision, and thus engaged in] . . . the type of opportun-

^{96.} Steven P. Croley & Jon D. Hanson, What Liability Crisis? An Alternative Explanation for Recent Events in Products Liability, 8 YALE J. ON REG. 1, 46 n.160 (1991).

^{97.} Larry E. Ribstein, Limited Liability and Theories of the Corporation, 50 MD. L. REV. 80, 110 (1991).

^{98.} John C. Coffee, Jr., *The Mandatory/Enabling Balance in Corporate Law: An Essay on the Judicial Role*, 89 COLUM. L. REV. 1618, 1679-80 (1989).

^{99. 941} F.2d 588 (7th Cir. 1991).

^{100.} Id. at 591-92.

^{101.} *Id*.

^{102.} *Id.* at 592.

^{103.} Id. at 598.

istic behavior in an ongoing contractual relationship that would violate the duty of good faith."104 While Judge Posner remanded the question to the district court, he acknowledged that, at a minimum, the doctrine of good faith must be read into the contract and furnished a default out of which a party would need to contract.¹⁰⁵ If, in not reminding GE of paragraph 34, plaintiffs had violated that duty, the buy-back would not be enforced. What is extraordinary about this decision is that even between two sophisticated parties, Judge Posner seems to impose a default obligation of disclosure. Of course, I would expect Eric Posner to argue that this opinion has nothing to do with the choice of a default. But it is equivalent to a default if you believe (as I do) that the result would have been different if the original contract had explicitly said that the lessee has no duty to disclose the buy-back option or its formula. The decision is thus equivalent to a default promise to disclose information about the buy-back option unless otherwise indicated in the original contract.

D. What About Hadley?

To this point, I have not taken up the question of whether the central example of *Hadley* in fact constitutes a penalty default. Posner himself is not sure—claiming only that this "rule is *probably* not a penalty default rule."¹⁰⁶ In one sense *Hadley* can be seen as a majoritarian rule. In our example, the majority of contractors fail to contract around and indeed end up with fully compensatory damages. Moreover, as Bob Scott and others have seen, the *Hadley* rule is majoritarian in the sense that a majority of contracting parties would prefer the rule that deters the strategic withholding of information by an unrepresentative minority.¹⁰⁷ If we go far enough back behind the veil of ignorance, all information-forcing rules are majoritarian. From this perspective, the dichotomy between majoritarian and penalty defaults is false.

But the *Hadley* rule example is still powerful because its efficiency stems from its inducing some contractors to contract around the default, rather than from enabling parties to save on the costs of contracting around it. At the time Rob and I were writing, there was a consensus that defaults should be chosen to minimize the costs spent on contracting around them. But the efficiency of the *Hadley* default does not stem from that at all. Indeed, we showed that full

^{104.} *Id.* at 596.

^{105.} Id. at 597-98.

^{106.} Posner, supra note 1, at 565 (emphasis added).

^{107.} See Robert E. Scott, *Rethinking the Default Rule Project*, 6 VA. J. 84, 85-86 (2003); see also Ayres & Gertner, supra note 27, at 1606 ("In one sense, the limited liability default is actually a kind of majoritarian rule because a majority of the contractors (the low-cost millers) would prefer it.").

compensation might lead to no opt-out at all—low-cost shippers were deterred by sufficient contracting costs.

Others scholars at the time—including Easterbrook and Fischel argued that default rules should be set not at what the majority of contractors wanted, but at what the particular contractors would want if they were fully informed.¹⁰⁸ This full-information hypothetical contract idea is also at sharp odds with the *Hadley* approach. In a full-information world, high-cost shippers would not contract for partial compensation—so setting a default of partial compensation must be motivated by some other theory of default setting.

In retrospect, the *Hadley* example is not the cleanest example of a penalty default in part because it does not fit within the first guidepost of inducing a majority of contractors to contract around the default. But I continue to believe that it was sufficient unto the day in showing that both the transaction cost minimization and full-information hypothetical contracting approaches were insufficient. The *Hadley* example showed that the informational impact of contracting around was an important consideration in choosing among competing defaults.

III. RESPONDING TO MASKIN'S CLAIM

It is more than a little scary to be told by Eric Maskin that your game-theoretic analysis is "flawed" and "logically in error."¹⁰⁹ In this Part, I rebut these claims. The original *Hadley* model is still an equilibrium example of the potential efficiency of information-forcing rules.

Let me begin by openly admitting that Maskin is a much, much better game-theorist than I am. If this dispute is going to be adjudicated on an ad hominem basis, I lose.¹¹⁰ He has also been unerringly kind and generous to me throughout my career. It pains me to cross swords with someone whom I have so long admired.

^{108.} See FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 44 (1991); see also Ian Ayres, Making A Difference: The Contractual Contributions of Easterbrook and Fischel, 59 U. CHI. L. REV. 1391, 1402-03 (1992).

^{109.} Maskin, supra note 1, at 557.

^{110.} I have published mistakes in the past. But unlike most academics, I have acknowledged these mistakes in writing. See Ian Ayres, Alternative Grounds: Epstein's Discrimination Analysis in Other Market Settings, 31 SAN DIEGO L. REV. 67, 86-87 (1994) ("I was wrong in claiming that Jim Crow laws 'rarely placed restrictions on employers'..."); Ian Ayres & Eric Talley, Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules, 105 YALE L.J. 235, 241 (1995) ("We concede that Kaplow and Shavell are right that our original example did not adequately distinguish between the consensual and nonconsensual advantages..."); Ian Ayres & Eric Talley, Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade, 104 YALE L.J. 1027, 1065 (1995) ("We were wrong."). But in contrast to these examples, I refuse to admit error in the face of Maskin's criticisms.

But a lot is at stake here. If Maskin is right, lots and lots of people are wrong—including a bevy of law-and-economics scholars who understood the importance of information-forcing rules before I did (such as Lucian Bebchuk, Robert Scott and Steve Shavell),¹¹¹ and an even larger bevy who have signed off on the theory afterwards (including Eric Posner!).¹¹² If Maskin is right, we might even start to question whether it is useful to have law and economics done outside of economics departments.

Before delving into the nitty-gritty details of the modeling to explain why his criticisms are unconvincing, let me step back and give a more intuitive explanation for why Maskin's attack on penalty defaults must be misplaced.

A central idea that Rob and I were trying to get across is that the very act of contracting around can have informational effects. Courts, in establishing rules that parties can displace, should take into account informational effects because the process of displacing them can inform people both inside and outside the contract. Fundamentally, we believe that different defaults can have different informational effects into account (along with a bunch of other stuff) in choosing among competing possible defaults.¹¹³ Another way to put the idea that "different defaults can have different defaults can be active informational effects." The act of contracting out (or displacing the default) is the act of separating.

Rob and I showed (and I still believe) that different defaults can, at times, give rise to different types of contractual pooling and sepa-

^{111.} Lucian Ayre Bebchuk & Steven Shavell, Information and the Scope of Liability for Breach of Contract: The Rule of Hadley v. Baxendale, 7 J.L. ECON. & ORG. 284 (1991); Charles J. Goetz & Robert E. Scott, The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms, 73 CAL. L. REV. 261 (1985). The information-forcing effect of Hadley had been noticed by a number of authors. See, e.g., RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 114-15 (3d ed. 1986); Barnett, supra note 92, at 867-68; Frank H. Easterbrook & Daniel R. Fischel, Limited Liability and the Corporation, 52 U. CHI. L. REV. 89, 113 n.45 (1985); Charles J. Goetz & Robert E. Scott, Enforcing Promises: An Examination of the Basis of Contract, 89 YALE L.J. 1261, 1299-1300 (1980); Robert E. Scott, The Case for Market Damages: Revisiting the Lost Profits Puzzle, 57 U. CHI. L. REV. 1155, 1195-96 (1990).

^{112.} Posner, *supra* note 1, at 586 ("The model and their general point are correct: within the confines of the model's assumptions, there may be good reasons for penalty default rules."); *see also* Barry E. Adler, *The Questionable Ascent of* Hadley v. Baxendale, 51 STAN. L. REV. 1547, 1582 (1999) (qualifying the range for which the result holds but still concluding that penalty defaults "could be efficient"); George S. Geis, *Empirically Assessing* Hadley v. Baxendale, 32 FLA. ST. U. L. REV. 897, 955 (2005); Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules*, 100 YALE L.J. 615, 621 (1990).

^{113.} Choosing defaults is different than choosing mandatory rules. Since by definition mandatory rules prohibit contracting out, then the choice among different mandatory rules cannot turn on the potentially varying informational impacts of contracting around.

rating equilibria. In choosing among these equilibria, lawmakers should consider not just the transaction costs, as Maskin suggests, but the potential impact on efficiency of different informational effects. Our original analysis showed that the *Hadley* default might give rise to a more efficient separating equilibrium, while a fullcompensation default might give rise to a less efficient pooling equilibrium.¹¹⁴ The real danger of Maskin's analysis is that readers might mistakenly come away thinking that lawmakers do not need to consider the informational impact of law. But notwithstanding Maskin's arguments, it is still clearly the case that different defaults can have different informational effects and can give rise to different degrees of pooling and separating.

So, how is it that Maskin could be led to a different conclusion?¹¹⁵ Well to begin, it is not clear that Maskin is really concluding that penalty defaults can never be efficient. He concedes that the nearly identical model of Bebchuk and Shavell is not in error.¹¹⁶ Like the Ayres-Gertner model, the Bebchuk and Shavell model of *Hadley* gives rise to the possibility that a penalty default can be efficient if transaction costs keep disfavored contracting types (the low-value buyers) from contracting around a full-damages default. In accepting the Bebchuk and Shavell result, Maskin is accepting the idea that defaults can be preferable not because they economize on transaction costs but because they instead induce more efficient separating equilibria.

Maskin's reason for distinguishing between the two mathematically identical models turns solely on the interpretation he attributes to the transaction cost variable in the two models. Maskin accepts the possible efficiency of penalty defaults when the transaction cost is a cost of communication between the parties (which he attributes to Bebchuk and Shavell), while he rejects the possible efficiency of penalty defaults when the transaction cost is the cost of contracting around the default (which he attributes to Ayres and Gertner).

^{114.} In other examples, a penalty default might induce a more efficient pooling equilibrium (where everyone pools at a new contract term that induces more efficient precaution relative to an alternative nonpenalty default where contractors pool at the less efficient default term).

^{115.} In an initial (widely circulated) draft, Maskin confused renegotiation of existing contract with initial contract. In this original draft, this confusion between renegotiations and negotiations was most easily seen in his analysis of whether low-value buyers will be able to contract around a full-damages default. Maskin claimed that "even if the buyer is willing to make the proposal [to stipulate lower damages in return for a lower price], the seller will reject it." Maskin claimed that since the proposal signals that the buyer has lower damages, the seller will make more money by simply lowering its precaution but keeping the original higher price. But Maskin's error was in assuming that default bargaining takes place after the parties have already entered into an initial contract with a set price.

^{116.} Maskin, *supra* note 1, at 557; Bebchuk & Shavell, *supra* note 22.

Maskin rejects the idea that costs of drafting an alternative damage rule can support an inefficient pooling equilibrium under the full-damages default, because he claims the parties could achieve a separating equilibrium by signing a contract in which "the buyer is to divulge [its] value."¹¹⁷ Maskin's idea is that even though the parties would still pool on the full-damages contract term, the low-value and high-value buyers would divulge their values to the seller so that the seller could put forth the efficient effort for each buyer type.

This is a characteristically inventive alternative. But it is not particularly persuasive. First, the cost of writing the "buyer must divulge its value" term might very well just replace the cost of contracting around the full damage rule-and therefore support the efficiency of the *Hadley* default. Maskin might respond that a norm that buyers will divulge their value does not need to be inserted in the contract. But if disclosure is not promised, what is to assure that a buyer will actually disclose after contracting? Maskin asserts "the buyer would be perfectly happy to divulge the information, because, given fulldamages liability, she would continue to get her full benefit."118 But Maskin's argument masks that buyers are at best indifferent after contracting about whether they will voluntarily divulge their values. Moreover, one can imagine that low-value buyers will be tempted to say that they have a high value so as to induce higher effort on the part of sellers. Indeed, any possibility of undercompensation by the court would make misrepresentation a dominant strategy for lowvalue buyers. Of course, Maskin might respond that misrepresentation could be punished if (the seller breaches and) the buyer is found to have breached her promise to divulge her accurate value. But this pushes Maskin back to the untentable argument that the parties must incur the costs of explicitly contracting for a divulging duty.

At the end of the day, Maskin's contractual alternative is truly ingenious, but it is hardly a serious challenge to the possibility that penalty defaults can be efficient. Indeed, even within the *Hadley* context, his example either substitutes one type of contracting cost for another or is based on a fragile and unrealistic noncontractual divulging norm. Still Maskin's article is an interesting contribution to default theory for emphasizing the importance of being precise in articulating the exact nature of transaction costs. Maskin is right that understanding the particular type of costs is important to analyzing the efficient default rule. But he is wrong in suggesting that this attention to the precise type of costs undermines the possibility that penalty (or information-forcing) defaults will at times be efficient.

^{117.} Maskin, supra note 1, at 561.

^{118.} Id.

IV. CONCLUSION

Notwithstanding the title, I have tried in this response to provide substantive arguments for why the central claims of the two Erics are mistaken. Eric Posner is mistaken that there are no penalty defaults because there are plenty of examples of legal rules that are the equivalent of default rules whose potential efficiency is best understood by their informational impact of the separating equilibria that they induce. Eric Maskin is mistaken because his counterexample merely displaces one type of contracting cost with another. Even after taking into account his divulging promise alternative, there will remain intermediate transaction cost levels where the choice of default impacts the degree and efficiency of contractual separation.

It would be wrong for lawmakers to retreat to the bad old days where majoritarian default setting was seen as the only possibility. And while it has not been an emphasis of this Article, the new learning on behavioral economics radically expands the potential for alternative choices. Attempts to de-bias or engage in asymmetric paternalism suggest a structuring of defaults, menus and altering rules that simply cannot be comprehended by the traditional majoritarian analysis.¹¹⁹

Different defaults have different information effects and induce different degrees of separation. At the end of the day, lawmakers should still take these differences into account when picking among competing defaults.

^{119.} See, e.g., Ian Ayres, Menus Matter, 23 U. CHI. L. REV 3 (2006); Colin Camerer et al., Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism," 151 U. PA. L. REV. 1211 (2003); Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 STAN. L. REV. 1471 (1998); Yair Listokin, What Do Corporate Default Rules and Menus Do? An Empirical Examination (Aug. 21, 2006) (working paper, on file with Yale Law School).