The Duty to Disclose and the Prisoner's Dilemma: Laidlaw v. Organ

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Obscurity, in other words, is not encountered on the way to intelligibility, like an obstacle, but rather lies beyond it, as what prevents the reader from being satisfied with his own reading. Obscurity is an excess, not a deficiency, of meaning.¹

The critical part of this Article argues that Professor Anthony T. Kronman’s recent significant article, entitled *Mistake, Disclosure, Information, and the Law of Contracts*,² gets the law of unilateral mistake wrong. Its constructive part, built on the reasons Kronman’s article errs, uncovers a heretofore unacknowledged variable in the legal calculus of unilateral mistake. To begin, this Article indicates in an abstract and general way the source of the failure of Kronman’s article and suggests why the article nevertheless has great value.

The article fails, if my argument is correct, by neglecting a precept of law and economics. This precept is conveniently stated as a theorem attributed to the first economist, Adam Smith.

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By pursuing his own interest [the individual] frequently promotes that of the society more effectually than when he really intends to promote it.  

By the best current thinking, the individual can pursue only his own interest. Smith's text concedes as much, disparaging assertions that an individual is acting otherwise as "affectation[s]."

Smith's theorem does not hold everywhere, but is a consequence of the following axiom:

There are no externalities.

Externalities are effects on others—B, C, . . . —of an individual A's actions. For example, A strikes B with her automobile; B's harm is an external effect of A's behavior. These effects enter into the social welfare function and separate A's interest from the social good. According to law and economics, law should and usually does make the axiom true. Thus, the effect of law is to cause Smith's theorem to hold where otherwise it would not. The law accomplishes this by reimposing on A the harms and benefits she imposes on B, thus internalizing the externalities.

To see how the law functions according to law and economics, consider the expectation measure of contract damages. A has contracted with B. A will breach if and only if breaching gives her more utility than not breaching. If the law uses an expectation measure, A will breach if and only if A can compensate B and come out ahead. This result is Pareto optimal. B's utility is the same no matter what A does; A's utility is the highest she can create; by hypothesis, everybody else's utility stays the same.

That is the analytic paradigm. Kronman does not do an equivalent job for unilateral mistake. Why, then, study Kronman if he is wrong? First, he might not be wrong, and his theory is pretty good anyway. The problem in assessing his article is this: the consideration that invalidates his analysis turns up in an article he

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5. A. Smith, supra note 3, at 423.
cites. What weight to assign this fact is unclear to the reader: did Kronman misapprehend what was being said, disbelieve it, or think it insignificant? It being "harder than ever, on these battlefields, to tell friend from foe," it is advisable to strike out polemically at whatever scholar one is standing beside.

A second reason to study Kronman's article is that its shortcomings are admonitory for the journeyman practitioner of law and economics. The article is paradigmatic. A celebrated scholar wrote it to explain an apparently arbitrary discrepancy in the cases as promoting efficiency, as by convention articles in law and economics do. Courts, other scholars, and Kronman himself cite routinely as correct and instructive. If criticism is then incongruous, its lesson may be that one can deconstruct any text. Or, of greater local interest, Kronman having erred, the rest of us cannot escape error.


9. Jordan v. Duff & Phelps, Inc., 815 F.2d 429, 445 (7th Cir. 1987) (Posner, J., dissenting) ("an inventor is not required to blurt out his secrets, and a skilled investor is not required to disclose the results of his research and insights before he is able to profit from them"); Teamsters Local 282 Pension Trust Fund v. Angelos, 762 F.2d 522 (7th Cir. 1985) (Easterbrook, J.). "Often the law imposes no obligation to disclose. Much information is commercially valuable, and people must hide this information to exploit its value. If they could not hide it, they would not have the right incentives to produce it." Id. at 528. United States v. Dial, 757 F.2d 163 (7th Cir.) (Posner, J.), cert. denied, 474 U.S. 838 (1985).

10. Liability is narrower for nondisclosure than for active misrepresentation, since the former sometimes serves a social purpose; for example, someone who bought land from another thinking that it had oil under it would not be required to disclose the fact to the owner, because society wants to encourage people to find out the true value of things, and it does this by allowing them to profit from their knowledge. Id. at 168.

Third, the article is a fine vehicle for external criticism of law and economics. It does more than deviate from pristine legal-economic practice. Adam Smith’s theorem presupposes a world unlike ours, one having fewer discontinuities. This theorem juxtaposes individuals and society. Society must be more than an unstructured collection of individuals; such a collection is only a state of nature. Hobbes\(^{12}\) taught us that law—indeed, contract law, if we think broadly enough; that is, think of the social contract—is the most certain way to escape the primordial state of nature. In the law’s interstices, nevertheless, lurk other states of nature. A competing world view would imagine a regress of or an oscillation between states: law operates on a state of nature to beget a society that nurtures another state of nature that . . . .\(^{13}\) This world view is worth a look.

This Article has four parts. Part I establishes the argument of Kronman’s article, pausing at an anomaly evident even at the level of summary. Briefly, Kronman argues that the law of unilateral mistake should reward deliberate searches for information to elicit more information. He does not, however, indicate how much information is enough. Part II of the Article raises a counterexample to the law of unilateral mistake as Kronman understands this law. This counterexample is the jewel case, which Kronman himself adduces.\(^{14}\) It could, in happier circumstances, be only apparent, or do just limited, nonstructural damage. Hence, part III of the Article argues that the counterexample is not aberrational but symptomatic. The underlying malady becomes most pronounced just where Kronman’s analysis itself has its greatest impact, in contexts of deliberate search. The law is likely to make the individual search too much. These parts of the Article remain methodologically within law and economics. Part IV oscillates between internal and external criticism, juxtaposing to the market as Smith invokes it another model, derived from the Prisoner’s Dilemma.

Kronman, conventionally, argues that, the law being a certain way, it \textit{ought} to be that way, because that way is efficient. His

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\(^{12}\) Thomas Hobbes (1588-1679), an English philosopher and political theorist, is best known for his work \textit{Leviathan, or the Matter, Form, and Power of a Commonwealth, Ecclesiastical and Civil} (1651).

\(^{13}\) See B. Johnson, \textit{supra} note 1, at 118.

\(^{14}\) Kronman, \textit{supra} note 2, at 31-32.
fallback position, a response to the counterexample raised in part II of this Article, is that even if the law occasionally is not as efficiency requires, yet again it ought to be. Hence the thesis is at once descriptive and normative. This Article will not engage the descriptive part of the thesis on the most basic empirical level. This effort, consonant with Kronman’s, does not care intensely, nor care to dispute, that \( n \) cases come out one way and \( n + m \) oppositely.

**I. Kronman’s Explanation**

The explanation of Kronman’s article must be stated correctly; otherwise, a criticism of it as stated does not bear on the article. It is bootless to attack a camel for being a snake. The explanandum, sketched in section A, is easy. For the explanans, discussed in section B, this Article relies significantly on Kronman’s own summary of his article, published elsewhere. Kronman’s summary, however, is either incomplete or too weak. This Article displays it nonetheless, as a benchmark, so that deviations from it will require special pleading. Section C reports an apparent hiatus in the logic of Kronman’s article, as caught by the summary.

**A. The Discrepancy in the Cases**

Kronman’s article juxtaposes two kinds of cases.

On the one hand, there are many contract cases—generally classified under the rubric of unilateral mistake—which hold that a promisor is excused from his obligation to either perform or pay damages when he is mistaken about some important fact and his error is known (or should be known) to the other party.¹⁵

This line of authority is familiar under the maxim, “One cannot snap up an offer too good to be true.”¹⁶ In the easy cases, a party cannot be held to a contract if she has miscalculated in making a bid or has misread a document in a manner that is or should be obvious to the other party.¹⁷

¹⁶. Kronman, supra note 2, at 1.
¹⁷. *Id.* at 7 (citing 1 S. Williston, *A Treatise on the Law of Contracts* § 94 (3d ed. 1970)).
¹⁸. *Id.* at 6-7.
On the other hand, cases may also be found which state that in some circumstances one party to a contract is entitled to withhold information he knows the other party lacks. These latter cases typically rest upon the proposition that the party with knowledge does not owe the other party a "duty of disclosure."\(^{19}\)

Kronman’s model for cases of the second kind is the “celebrated”\(^{20}\) case \textit{Laidlaw v. Organ}.\(^{21}\) In that case, the litigants had contracted for the sale of 120,715 pounds of tobacco. The buyer, Organ, knew that the War of 1812 had ended, but Laidlaw, the seller, did not. This fact was soon to become public knowledge and cause the price of tobacco to increase. Indeed, the morning they contracted, tobacco prices increased thirty to fifty percent.\(^{22}\) The disposition of \textit{Laidlaw} is inconsequential: the Court remanded to the trial court to determine if the buyer had “imposed” on the seller.\(^{23}\) Kronman focuses on a comment in dictum in the brief opinion by Chief Justice Marshall.\(^{24}\) This dictum answers Marshall’s inquiry “whether the intelligence of extrinsic circumstances, . . . which was exclusively within the knowledge of the vendee, ought to have been communicated by him to the vendor.”\(^{25}\) Marshall’s answer was that the vendee “was not bound to communicate” the intelligence.\(^{26}\) Hence Organ could exploit Laidlaw’s mistake.

Nothing is unknown or surprising about the law here. Kronman’s genius is in seeing that the two kinds of cases do not just give nonidentical results. For instance, a case articulating the Rule Against Perpetuities and one applying section 90 of the \textit{Restatement (Second) of Contracts}\(^{27}\) do that. Any arbitrary collection of cases can be subsumed under some rule or infinitely many rules, or can be subsumed under inconsistent rules. Deciding which

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19. \textit{Id.} at 1.
22. \textit{Id.} at 182-83.
23. \textit{Id.} at 195.
24. See Kronman, \textit{supra} note 2, at 10-11.
26. \textit{Id.}
cases to juxtapose is a creative act and ought to be judged by functional and even aesthetic criteria.

A lesser scholar than Kronman might casually distinguish the clerical, arithmetical, or semantical errors in the first kind of case from the substantive, nonlinguistic errors in the second kind. The linguistic/substantive dichotomy cannot, however, be defined unequivocally, nor does it carve contract law at a joint, because some substantive mistake cases decide for the mistaken litigant. Indeed, the problem is that more cases decide for the mistaken litigant than Kronman’s article concedes. Kronman teaches that the pervading issue in the collected cases is, “[I]f one party to a contract knows or has reason to know that the other party is mistaken about a particular fact, does the knowledgeable party have a duty to speak up or may he remain silent and capitalize on the other party’s error?”

B. Kronman’s Hypothesis

To show how Kronman resolves this issue, this Article adduces his subsequent, considered recapitulation or summary in his contracts casebook. Laidlaw as a teaching vehicle is his creature, not Kessler’s or Gilmore’s, because the case first appeared in the book’s third edition. Kronman contributed only to this edition and had primary editorial responsibility for it. Where this edition speaks to mistake, it presumably represents Kronman’s seasoned thinking.

The relevant part of a note after the Laidlaw opinion states:

Kronman, in Mistake, Disclosure, Information and the Law of Contracts, 7 J. Legal Stud. 1 (1978), offers another approach to the problem. According to Kronman, “allocative efficiency is promoted by getting information of changed circumstances to the market as quickly as possible.” The information in question, however, does not arrive of its own accord; individuals supply it. To promote efficiency, judicial rules should encourage the gath-

29. See infra pt. II.
ering and provision of information. This requires that deliberate search be rewarded, or at least compensated as a cost. The casual acquisition of information, on the other hand, need not be protected, as a disclosure requirement for casually-acquired information would have little or no effect on the production of socially useful information.\textsuperscript{32}

Starting from the case law of unilateral mistake as Kronman perceives it, and guided by the casebook’s summary of his explanation, one plausible reading of Kronman’s article is as follows. The article first makes an empirical claim that cases of “deliberate search” are decided for the informed litigant and cases of “casual acquisition” against him.\textsuperscript{33} Stated differently, Kronman’s first explanatory step is to recharacterize the law’s partition of the set of unilateral mistake cases, yielding the following rule:

Decide against the ignorant party if and only if the knowledgeable party’s information is deliberately acquired.

Kronman’s article, then, must explain why the law has this particular rule. The article argues as follows. \textit{Ceteris paribus}, efficiency, or efficient allocation of resources, is beneficial; being informed promotes efficiency. Rewarding the deliberate acquisition of information elicits more information; therefore, law should reward deliberate acquisition.\textsuperscript{34} Contract law rewards this by enforcing contracts made between parties who deliberately acquire information and parties disadvantaged because they lack that information. Rewarding casually acquired information does not have the same effect, however, because one cannot be induced to do something inadvertently. That one cannot, together with the costs associated with deciding against a mistaken party, determines that in cases of casual acquisition of information, the mistaken party should win.

Kronman’s article as summarized in the casebook\textsuperscript{35} is weaker than his article, as this Article has just interpreted it, in three respects. First, the penultimate sentence of the casebook summary

\begin{itemize}
\item\textsuperscript{32} \textit{Id.} at 92 (quoting Kronman, \textit{supra} note 2, at 13).
\item\textsuperscript{33} Kronman, \textit{supra} note 2, at 4-5, 33.
\item\textsuperscript{34} \textit{Id.}
\item\textsuperscript{35} F. KESSLER, G. GILMORE & A. KRONMAN, \textit{supra} note 15, at 92.
\end{itemize}
begins by “requir[ing] that deliberate search be rewarded,” but
does not indicate how liberally, and later allows deliberate search
to be “compensated as a cost.” The rule in the interpretation less
equivocally directs a court: “Decide against the ignorant party . . .”

As to the second difference, consider two versions of the motto of Prussia. Judge Posner states it as, “[E]verything which is not permitted is forbidden.” This is wrong. Although mottos of states often are platitudinous, ordinarily they are contingent. Posner intended to say: “[E]verything that is not required is forbidden.” The casebook summary is like the first version. Just as Posner’s version lets citizens do or not do permitted things, the summary lets courts decide cases of casual acquisition either way. Kronman’s article, as interpreted, is like the second version. In neither does the citizen or the court have a choice.

Third, although this point is related to the preceding point, the casebook’s summary neglects the cost, if there be any, of deciding against the mistaken party. The article as interpreted, however, designates this cost a reason to decide for the mistaken party in those cases where deciding for the knowledgeable party would not increase society’s stock of information. In this particular the interpretation is more faithful to the article than is Kronman’s summary—or merely less truncated. The article does discern a cost here, but it only discerns, it does not scrutinize.

[W]here the decline in the production of a certain kind of information which is caused by denying its possessor the right to appropriate the information for his own benefit is small, it is likely to be more than offset by the corresponding social gain that results from the avoidance of mistakes.

Finding this cost yields a neater, more elegant result because the cases of casual acquisition become decidable—for the mistaken party. In these cases, the cost of deciding otherwise is not offset by any gain. Hence, for symmetry, Kronman should want to find, or at least allege, a cost.

36. Id.
37. United States v. Torres, 751 F.2d 875, 880 (7th Cir. 1984).
38. Kronman, supra note 2, at 15-16.
39. Id. at 14.
The significance of the casebook’s summary, other than as a guide to Kronman’s article, lies in its emasculation of the article. The differences between the summary and the article as interpreted ought to alert the reader and suggest a program for inquiry. Their cumulative effect is to make the hypothesis of the article less refutable. What is the empirical content of the summary? For cases of casual acquisition, nothing; for cases of deliberate search, at most that they go against the mistaken party. As summarized, Kronman’s hypothesis is like a psychoanalytic claim in that it is difficult to refute. What counts as a counterexample to the hypothesized Oedipus complex? Similarly, how must the law be to be inconsistent with the summary? Getting it backwards, deciding cases of casual acquisition for the knowledgeable party and cases of deliberate search against the knowledgeable party, would be inconsistent. But imagine that we order unilateral mistake cases along a continuum, $MM'$, running from entirely deliberate search to entirely casual acquisition. What varies along $MM'$ is $x$, the ratio of casual acquisition to total acquisition; it varies from zero at $M$ to one at $M'$. If Kronman’s rule is any good, at some point, $p$, the law abruptly stops deciding for the knowledgeable party and starts deciding against her. Kronman’s article does not identify the exact location of $p$.\textsuperscript{40} Also, the casebook summary hedges regarding what happens to the right of $p$.\textsuperscript{41}

C. Too Much Information?

The argument as summarized does not hang together. The operative part of the summary’s second sentence, “allocative efficiency is promoted by getting information of changed circumstances to the market as quickly as possible,”\textsuperscript{42} should entail the conclusion

\textsuperscript{40} Another, briefer recapitulation by Kronman states only that knowledge that “is the fruit of a productive search” should be rewarded, but there is otherwise “no economic justification for deciding for the knowledgeable party.” Kronman, supra note 11, at 767 n.22.

\textsuperscript{41} F. KESSLER, G. GILMORE & A. KRONMAN, supra note 15, at 92.

\textsuperscript{42} Id. (citing Kronman, supra note 2, at 13).
in the fourth sentence: “To promote efficiency, judicial rules should encourage the gathering and provision of information.” It does not, any more than it entails that sentence’s negation, or that sentence with ‘encourage’ replaced by ‘discourage’.

The deficiency is more obvious with cows: “Judicial rules should encourage cows” does not follow from “cows are good.” At least the claims about information and cows conflict. We may already have too many cows in that the marginal cost of maintaining a cow exceeds a cow’s marginal benefit. The same may be true of information. Where should the encouragement stop? We are talking about social cost here. Maximizing the number of cows or the amount of information seldom optimizes.

Kronman’s article recognizes that “information is costly to produce.” The resources used to produce this information might have produced something else. A contracting party, by deliberate search, incurred this cost prior to contract. The article’s other previously mentioned reference to cost was to a different cost, that of mistake. The cost of the search is internal to the searching party. Her loss through it is pro tanto society’s loss. The cost of mistake—if there be such a cost—is external to the searching party. It is a consequence of a legal rule that lets her profit from her search, and is avoidable, Kronman contends, by changing the rule.

The argument made by the casebook summary, however, may be an enthymeme; an apparently missing premise may be merely unexpressed. The unstated premise would be: “The amount of information is already suboptimal.” Additional resources, then, should be allocated to acquiring information, because the return on them would be greater than they can earn elsewhere. This is the meaning of ‘suboptimal’.

The casebook summary is, after all, a summary. If its argument is an enthymeme, the article, which gives the complete version, should state its missing premise. The article addresses the problem

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43. Id. The interpretation is more blunt: “Rewarding the deliberate acquisition of information elicits more information; therefore, law should reward deliberate acquisition.” See supra text accompanying note 34.
44. Kronman, supra note 2, at 4.
45. Id. at 14. See supra text accompanying note 38.
46. At this point, the reader may want to inquire, “Why information and not cows?”
of the optimal amount of information in a footnote, the gist of which is as follows. Economists disagree about how much information is best. They all agree, however, that if society lacked all property rights in information—as it would if institutions like patent law did not exist—there would not be enough information. Therefore, contract law should decide cases of deliberate search for the knowledgeable party; allocative error would then be less likely or smaller.

The footnote concedes, however, that “this may not be an optimal solution.” The reader should not so much reject as mistrust this resolution. Actually, the camel’s nose is under the tent. A vacuum exists preceding the ‘therefore’ in the above paraphrase of the footnote. One may investigate more fully than the footnote does how much information is optimal. A reasonable search easily displaces a presumption, inherently unstable, made unthinkingly. Such an investigation is the task of part III. Part II first examines a fragment of the existing law.

II. THE JEWEL CASE: A COUNTEREXAMPLE

The article’s hypothesis is weak and hence hard to refute, but the law nevertheless disappoints Kronman. This part studies one counterexample. Section A states its facts; section B studies the cost of a court deciding it for the knowledgeable party; section C explains how it is a counterexample and Kronman’s response to it. Kronman is acquainted with the counterexample; indeed, he struggles determinedly with it.

A. Facts of the Jewel Case

The ground rules for the game follow. Unilateral mistake cases will be ordered provisionally along line MM'. Speaking in binary terms, as if cases involved either entirely casual acquisition or entirely deliberate search, is usually empirically sufficient and con-

47. Kronman, supra note 2, at 17 n.46.
48. Id.
49. Id.
50. See supra text accompanying note 48.
51. Kronman, supra note 2, at 30-32.
ceptually clearer. Still, Kronmann's article sensitizes the reader to differences of degree.

Strictly speaking, casually acquired information (as I have used the term up to this point) represents the ideal limit of a continuum—the case in which the change in magnitude that results from eliminating one of the benefits of possessing certain information is zero. In any real case there will be incentive effects which fall somewhere along the continuum.\(^2\)

As one moves to the right along the continuum \(MM'\), the marginal benefit curve, which represents social gain from elicited information as a function of how that information is acquired, falls as information is more casually acquired. At a point \(p\), this curve intersects a constant or rising marginal cost curve, which represents the social cost a court incurs if it decides against the mistaken party. Our intention is to locate a case between \(M\) and \(p\) that decides against the informed party.

The counterexample is an illustration to section 12 of the Restatement of Restitution. The facts are here detached from a statement of their legal effect.

A, looking at cheap jewelry in a store which sells both very cheap and expensive jewelry, discovers what [A] at once recognizes as being a valuable jewel worth not less than $100 which [A] correctly believes to have been placed there by mistake. [A] asks the clerk for the jewel and gives 10¢ for it. The clerk puts the 10¢ in the cash drawer and hands the jewel to A.\(^3\)

The illustration is silent concerning how A obtained the information. Hence the reader has license to locate the hypothetical case anywhere along \(MM'\), indeed at \(M\). For all the reader of the Restatement knows, and manifestly for all the Restatement cares, A has spent her life as a student of the difference between genuine and fake jewels, and supports herself by frequenting jewelry stores to locate misclassified jewels.

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52. Id. at 14.
53. Restatement of Restitution § 12 comment c, illustration 8 (1937).
B. Cost in the Jewel Case

Kronman's article would decide for the mistaken party whenever the "social gain that results from the avoidance of mistakes" exceeds the social gain from eliciting information by deciding otherwise.\textsuperscript{54} When does this occur? Such a case eludes like a unicorn. A virgin in law and economics has no advantage over a prostitute in catching it.

Indeed, when Kronman speaks seriously of this social gain, he is making a pun on the expression 'mistake'. He has already persuaded the reader of the social gain from avoiding \textit{mutual} mistake. This is allocative gain. "According to Kronman, 'allocative efficiency is promoted by getting information of changed circumstances to the market as quickly as possible.'"\textsuperscript{55} For example, to eat Rose II of Aberlone, believing her barren, misallocates a breeding cow.\textsuperscript{56} In a milestone in legal literature, Currie poignantly presents the changed circumstance:

\begin{quote}
He caught his breath, and must not be blamed
If his voice was broken as he exclaimed,
"Rose, you're about to become a mother!"
She blushed and replied, "Ich kann nicht udder."
\end{quote}

To commit a $100 jewel to providing 10¢ of conspicuous consumption likewise misallocates the jewel.

The jewel case, however, concerns \textit{unilateral} mistake. Kronman can be the witness on the difference: "The most important doctrinal distinction in the law of mistake is the one drawn between 'mutual' and 'unilateral' mistakes."\textsuperscript{58} The distinction matters allocatively. Deciding the jewel case for $A$ does not misallocate resources. The only mistake was made by the jeweler in misclassifying the jewel, and $A$, by making a contract, is out to correct that.

The allocative loss comes from deciding against $A$. The same loss also occurs, albeit admittedly diminished, even if $A$ was informed

\begin{footnotes}
\item[54] Kronman, supra note 2, at 14. See supra text accompanying notes 37, 51.
\item[58] Kronman, supra note 2, at 5.
\end{footnotes}
casually. Contemplate a constant stream of information casually acquired. Kronman trades on contract law being unable to augment or diminish that stream. The point, however, is to use it; water flowing downstream unappropriated is wasted energy. The social engineering job the law should do is to divert the stream so that it turns reallocative wheels. The law must get the information and the jewel together by giving whoever possesses the information by which to reallocate the jewel a reason to deploy instead of sit on this information. Here the student of law and economics thinks, Pavlovianly, of a property interest.

Contract law creates this interest by letting A, who is informed, buy the jewel from the jeweler, who is not. If the law does not create this interest, A has no reason to tell the jeweler of the misallocation or otherwise act to correct it. In the worst case, the jewel stays mispriced and somebody else, C, purchases it for a 10¢ use. Thus the threat of allocative loss lies precisely in deciding for the jeweler, even though A's information is casually acquired. The casebook's summary of Kronman's article hints at this recognition by stating: "To promote efficiency, judicial rules should encourage the gathering and provision of information."\(^5\)\(^9\) Gathered information that remains unprovided is like water without the wheel. Furthermore, although A may not gather information, but instead acquire it casually, she still provides it, if she does provide it, deliberately.

Besides allocative loss, which supports a decision for the informed party, only this distributive consequence must be considered: if the law decides for A, the jeweler's mistake causes a transfer payment of $99.90 to A from the jeweler. A priori, this consequence is not a loss, nor a gain for that matter. A proponent of making it one or the other must appeal to interpersonal comparisons of utility, which depend on strong and dubious claims not to be made lightly. Alternatively, a proponent must allege and support a perception of this consequence as unfair. Kronman does not, and his doing so would be "the chit-chat of evaluation,"\(^6\)\(^0\) which would fall below the standard of detachment preferred in law and economics. Distributively, the transaction is a wash, but Kronman

60. P. de MAN, supra note 8, at 24.
does not rest his result on the distributive consequences. Describing Laidlaw, he remarks parenthetically, "In addition, of course, information . . . will have distributive consequences." He immediately moves on without attributing causal efficacy to these consequences.

C. The Result of the Jewel Case

The Restatement of Restitution decides:

The shopkeeper is entitled to restitution because the shopkeeper did not, as A knew, intend to bargain except with reference to cheap jewelry.

Kronman’s article is in deep trouble here, but not for the Restatement’s reason. That reason is a nonstarter today. Today’s reader interprets an intention to bargain not signaled by verbal behavior as an artifact of a decision already made, not as an independent ground for decision. The trouble is that the illustration decides for the mistaken party what might as well be a case of deliberate search. Kronman’s article would have the law the other way. The situation is especially bad because the article’s only reason to decide against A, the cost of mistake from deciding otherwise, is here inapplicable.

Kronman’s grace under great doctrinal pressure must delight the sociologist of science. Initially, Kronman argues unpersuasively for the illustration’s result as follows. The probability that a jewel will be misclassified is sufficiently low that the knowledge that it is misclassified probably was acquired casually. "[I]n the great multitude of cases" involving customers who discover mispriced jewels, A is not a trained jeweler or is not deliberately searching for jewels that are misclassified. How does Kronman know this, any more than the judges in Hadley v. Baxendale knew? He does, though. Studying jewels and then looking for misclassifications is not an economic enterprise.

61. Kronman, supra note 2, at 12.
62. Restatement of Restitution § 12 comment c, illustration 8 (1937).
63. Kronman, supra note 2, at 31-32.
At the same time, Kronman’s argument proceeds, treating misclassified jewel cases identically economizes adjudicatory resources. Of course, any discrimination a court makes, here concerning the mode of acquisition, absorbs the resources of court and litigants. Hence, without inquiry into the particular circumstances of this jewel case, A’s information should be treated as casually acquired, and the jewel should be returned. Hence the Restatement is right.

To reconcile theory with purported praxis in this way hardly convinces. Courts discriminate by necessity, and this particular discrimination is as cost effective as most. Kronman’s own distinction between cases of deliberate search and those of casual acquisition dangles by the thread of his unproved assertion of the cost of mistake. Why else does a court not decide invariably for the knowledgeable party? Kronman can hardly in good conscience cast the first stone of cost effectiveness. As Kronman immediately concedes by wild understatement, his explanation is “admittedly a rather tenuous one.”

A less confident scholar might here reassess her thesis. If it does not get the law right, probably the thesis is wrong. Kronman, however, makes the opposite move and doubts the Restatement of Restitution. The tenuousness of his explanation he transmutes into a “reason for rejecting the view of the restaters.” Either the Restatement has misstated the law, or the law is wrong. The latter claim is an index of doctrinal trauma. Ordinarily such a desperate concession is made only in extremis by scholars of law and economics; this subdiscipline conventionally takes a Panglossian view of the actual legal world. Kronman’s resort to the claim thus lays bare the stress to which this illustration subjects the hypothesis.

The obvious lesson here is that Procrustes would return not as an innkeeper but as a scholar in law and economics. That, however, is not a lesson the reader should take away from the Restatement of Restitution. Deriving a hypothesis inductively and then using this hypothesis to reject part of the data on which it is based is perfectly good science, in physics as well as in law. How else can one correct observational errors? Still, the legal scientist ought to ask two questions. First, how much of the data does the hypothesis

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65. Kronman, supra note 2, at 32.
66. Id.
discard? Here this Article simply suggests that a skeptical reading of Kronman’s evidence puts much of it at risk. Second, would a modified or different hypothesis explain more of the data as elegantly? In different ways, for different hypotheses, both of which rival Kronman’s, parts III and IV answer the second question affirmatively.

III. GENERALIZING FROM THE JEWEL CASE

That the jewel case fits anywhere along line $MM'$ is predictable from the novelty of Kronman’s hypothesis. This novelty implies that the Restatement’s illustration, reflecting or misapprehending earlier law, treats the mode of acquisition as irrelevant to how a mistake case is decided. Kronman’s article uncovered a dependency unperceived earlier.

Kronman sticks with this dependency too long, however. Part III of this Article adds another variable, $y$, measured along $NN'$, orthogonal to $MM'$. Section A argues for deciding the jewel case for the knowledgeable party because this accomplishes what the expectation measure of damages does. Section A and section B then begin a taxonomy that seems complete, but is not. The discovery of omitted cases in section C generates the new dimension.

A. The Jewel Case as Paradigm

“But some information is almost always preferable to none,” Judge Easterbrook instructs.67 This is as good a place to start as any. We already realize why we prefer information: to allocate resources. Connect this reason to the introduction’s paradigm of how the law promotes Pareto optimality; that is, to the expectation measure of contract damages. The paradigm goes as follows. $A$ and $B$, by contract, have allocated their resources one way. The law tells $A$: “If by breaching the contract you can be more efficient, go ahead, and keep all the social gain.”

Deciding the jewel case for $A$ fits the paradigm. Before $A$ acts, the social interest lies in getting the jewel to its highest use. The

67. Flamm v. Eberstadt, 814 F.2d 1169, 1175, (7th Cir. 1987) (referring to schedule 13D forms filed in a tender offer containing statements about a potential merger accompanied by disclaimers and cautioning about risk).
law, if it enforces A’s contract with the jeweler, says: "If you, A, can allocate the jewel more efficiently, contract for it at its misallocated price, reallocate it, and, again, keep all the social gain." The result is Pareto superior. The jeweler is as well off as before, A is better of, and everyone else stays the same. Of course, the jeweler has lost the potential to be better off by discovering the mispricing for himself. But because reallocating just cashes the potential in, the potential is lost through reallocating no matter what. The jeweler—or A, for that matter—does not have a property interest in the potential unless we say he does.

Additional, minor allocative effects occur in the jewel case and its analogues. Something of the sort happens with contract damages too. For instance, a recent mystery novel[68] turns on the supposed discovery of a duplicate of a stamp previously believed unique. The elasticity of demand for stamps was such that the two stamps together were less valuable than the one. Here, then, is a case of a correct allocation reducing wealth. Still, to repeat Kronman’s line, for the law to discriminate among elasticities is not cost effective, at least not here. In a climax of sorts, the owner of one stamp acquired the other and destroyed one. The value of the remaining stamp then should have gone back up. One stamp was fake, one genuine; he destroyed the genuine stamp. Discovering the true value of the surviving stamp, finding out that it was counterfeit, hardly increased wealth either.

The unexpected aspect of the jewel case viewed as a paradigm, the aspect that should trouble the reader, is that contract law, represented by the Restatement illustration, does not acquiesce. Law and economics can explain the expectation measure as being efficient. At this stage of this Article’s dialectic, however, the law of unilateral mistake opts for being inefficient. Several reasons now support Kronman’s claim that the Restatement is wrong: Kronman’s straight out; Kronman’s with the costs of mistake better understood; and this last new allocative reason.

Still missing is a counterweight, a reason for contract law to be as the Restatement says it is. The law is like Neptune’s orbit before Pluto was discovered or hypothesized; Newtonian and legal mechanics do not wholly explain our observations. This Article

must find the equivalent of a gravitational force, besides those equivalents Kronman discusses, whose effect on the legal rule concerning unilateral mistake can be discerned. This Article has not, however, identified this equivalent force yet. Actually, two forces are discussed, one in section C and the other in part IV.

B. The Converse Jewel Case

What happens if the customer, instead of the jeweler, makes the mistake?

A, who owns a store that sells both very cheap and expensive jewelry, knowingly places a jewel worth not more than 10¢ in a display of otherwise expensive jewelry, pricing it at $100. B, mistaking the value of the jewel, asks the clerk for it and gives the clerk $100. The clerk puts the $100 in the cash drawer and hands the jewel to B.

The law of the jewel case and that of its converse are asymmetrical. In the jewel case a real choice exists: we must inquire what the law is, and we believe it might be otherwise. But in the converse case, deciding for A is doctrinally awkward and hard to imagine. Though not as hard as imagining a round square, the idea is still difficult. We cannot help but think of fraud. A reason to allege fraud in the converse of the jewel case is that A is not a passive recipient of representations, as in the jewel case. She is the representing party, whose customer is likely to rely on her representations.

Finding a representation by A, however, may be not a cause but a consequence of our intuition of how the case comes out. An allocative reason for the asymmetry also exists. Allocative gain from deciding the converse case for A is uncertain. Deciding for A misallocates resources because a 10¢ jewel then does the work of a $100 jewel. This misallocation, if it indeed is a misallocation, appears to be a good thing. If the 10¢ jewel can do the work, why not let it? The result resembles a gain from technological improvement.

69. The concept of fraud is of course close enough to that of unfairness to discommode analytically. See United States v. Holzer, 816 F.2d 304 (7th Cir. 1987).
Judge Posner, in citing Kronman’s rule, explains that “society wants to encourage people to find out the true value of things.”

To find out a thing’s true value cannot be a final cause for Judge Posner; he cannot stop here. No result counts for Posner on other grounds than efficiency. Finding out a thing’s true value, however, is not straightforwardly efficient here. Perhaps being deluded is bad in principle, but this principle is certainly not an economic one.

Perhaps the economic problem that results from letting a 10¢ jewel do a $100 jewel’s work is that it is the nature of misallocations eventually to be corrected. The discovery that in a particular case an item is not genuine may proportionately devalue every genuine item of its kind. No jewel is an island, hence the value of every jewel is diminished when the value of any one is impeached.

C. Cost/Benefit in Laidlaw

The reader may think that every case must fall under section A or section B. A unilateral mistake is a misallocation. If A, always the party not mistaken, intends to gain by correcting the misallocation, then the case fits in section A. If A intends to avoid loss by continuing the misallocation, then the case belongs in section B. Tertiam non datur; no third possibility exists.

The reader may be surprised to discover that Laidlaw, Kronman’s own teaching device, is a third kind of case. Superficially, it looks like the jewel case, with tobacco substituted for the jewel. Organ is A; Laidlaw, the jeweler. Organ found out the war had ended, realized the tobacco was misallocated, and contracted, intending to profit through reallocating it. The social gain was the difference between the prices of the tobacco in its two uses: thirty to fifty percent of $7544.69. Organ received all the gain; hence Laidlaw is a jewel case. One thing is certain: Laidlaw is not a converse jewel case.

The trouble with the above analysis is that the tobacco in Laidlaw was at no time misallocated. Its highest use was exactly what it was doing: lying in New Orleans waiting to be transported abroad. The tobacco hardly had a second highest use; 120,000

pounds was too much to consume domestically, even at zero price, we may suppose. The information did not change the use of the tobacco, only its value in that use. It became more valuable because it could be shipped out sooner.

The distinction here is that between a misallocation—hence a misuse—on the one hand and a misperception of value in a correct use on the other. This distinction collapses early. As an illustration, consider the jewel case. Imagine that \( L_1 \) wears the jewel if it is misallocated; \( L_2 \), a finer lady, if it is not. Its use is always adornment; wearing it evokes pride and envy, although in different amounts. Is this one use or two? Individuating uses in vacuo is like the Restatement deciding what the jeweler intended to bargain about. Neither is dispositive.

The conceptual distinction is, however, merely epiphenomenal. What counts is the underlying pragmatic distinction. In the jewel case, on the one hand, the knowledgeable party’s private gain equalled the social gain. In Laidlaw, on the other hand, private gain was the difference between the price Organ paid and the price after the news that the war had ended was made public, or some $3000; the social gain was zero. Laidlaw contains only a transfer payment. Organ gets more money, Laidlaw gets less. The effect of the contract in Laidlaw is redistributive only, hence prima facie inconsequential.

Thinking about Laidlaw along these lines makes it out to be more nearly a polar case than it actually is. Organ’s private gain in some degree carries over into social gain. If Organ possessed the tobacco for a while before its new value was recognized, he might have protected it better than Laidlaw might have. For example, he would have been less likely to grind it into fertilizer. Laidlaw, then, is not an unadulterated case of purely private gain with no component of social gain. Still, the social gain exists only as a matter of fact. Analytically, it need not have been there. It cannot ground an objection in principle to the pragmatic distinction. Also, the important point is not that no social gain exists but that a gap exists between social and private gain.

Besides, adding facts of Laidlaw, which so far has been described imperfectly, refines away this social gain. Curiously, these facts interest Kronman so that he relates them to his reader as
background or color. Kronman, however, neither recognizes nor alerts his reader to the divergence these facts cause between the private and social products of information. Indeed, social gain approaches zero in this very case.

The record in Laidlaw states that the parties contracted "soon after sunrise on the morning of Sunday, the 19th of February, 1815." The news that the war had ended was "made public in a handbill on Sunday morning, 8 o'clock, the 19th of February, 1815." How long before eight o'clock is a sunrise in winter in New Orleans? We can, in thought, telescope the interval between contracting and publicity to a single instant. Expected social gain, likely proportional to the length of the interval, vanishes. Private gain, meanwhile, does not change. Organ, by hypothesis, always captures the entire difference in market price.

Actually, as with Kronman's dichotomy between deliberate search and casual acquisition, which anchors our relationship between casual acquisition and total acquisition, a continuum underlies the artificial, binary opposition between no social gain and social gain that equals private gain. Let the ratio of social return to private return vary along $NN'$. At the jewel case end, $N'$, the ratio is one; at the Laidlaw end, zero. "In any real case there will be [social return/private return] effects which fall somewhere along the continuum." 

The jewel case itself need not be an end point, but at least it does not fit well at the opposite end. To redescribe it to make it fit at $N$, assume that the mispricing is so transparent that if $A$ does not expose it, the next customer in line, $C$, will. Then the Restatement result might be right precisely because $A$ can contribute nothing socially. This redescription does not work, however, because if $A$ has no reason to reveal the mispricing, neither has $C$. Laidlaw differs because Laidlaw was about to learn independently that the war had ended. The information would have been transmitted without the impetus of contract law. In order to locate the

71. Kronman, supra note 2, at 10.
73. Id.
74. Kronman, supra note 2, at 14 ('social return/private return' substituted for 'incentive'). See supra text accompanying note 52.
jewel case at $N$, the misclassification must have been so gross that the jeweler herself would have apprehended it immediately.

D. The Consequences of $NN'$

Kronman's theory succeeds, as applied to cases of deliberate acquisition, if all unilateral mistake cases are clustered at $N'$, the jewel case end of $NN'$. Yet the reader should allow no unargued-for premise, no presumption, that the density of cases along $NN'$ is not uniform. A case elsewhere than at $N'$ casts the theory in doubt.

The rule in damages analogous to the Kronman rule of unilateral mistake would simply let $A$ breach. In no case would damages be awarded. Such a rule is efficient only if social and private gain from contract breaching coincide. Except accidentally, however, they do not. $A$'s gain by breaching and $A$'s gain by exploiting mistake both have an allocative and a distributive part. The social gain is just the allocative part; the private gain is both. The true rule of damages is the expectation measure, which offsets the distributive part and sets $A$'s gain at social gain. The expectation measure is the true rule because it is efficient, and uniquely so: by this measure alone $A$ breaches if and only if breach is socially best. The rule for unilateral mistake should be similarly efficient.

Pretend that the law of unilateral mistake is as Kronman specifies it. Ask how $A$, or Organ, acts. $A$ invests in information until her marginal return equals her marginal cost, making private marginal net gain zero. How else can she act? $A$, however, should equate social marginal return and cost. The cost to $A$ is her cost of acquiring information. All of this is social cost. $A$ overinvests in information if her return exceeds the social return. Her return exceeds the social return everywhere along $NN'$ except at $N'$. Only there does $A$ pro tanto promote the public good by pursuing her own interest.

That is, $A$ gets it wrong if—or, in the nonbinary case, to the extent that—hers is a case of deliberate search rather than casual acquisition. $A$ does not invest in casual acquisition; therefore, a fortiori, she does not invest in it excessively. Kronman's reason to decide against the ignorant litigant, which he thinks applies only in

75. See supra text accompanying notes 32-33.
cases of deliberate search, is counteracted by other allocative considerations only in these cases. Maybe, paradoxically, the knowledgeable party's strongest cases are those of casual acquisition.

Taking account of both the degree of deliberateness with which information is acquired and the ratio of social return to private return gives a plane whose x axis is $MM'$ and y axis is $NN'$.

Kronman's argument is good only along the line in the $xy$ plane given by $y = 1$. Even along $y = 1$, Kronman's argument gets worse as $x$ increases, because it does not get casual acquisition exactly right. Kronman neglects to motivate $A$ to provide as well as produce information, but in the big picture this is a minor consideration.

Any unilateral mistake case fits somewhere in the $xy$ plane. We can say that a court should decide for the knowledgeable litigant if $x$ is small and $y \equiv 1$, to elicit information. This is Kronman's case. If $x$ is still small and $y \equiv 0$, a court should decide for the mistaken litigant to avoid eliciting information. This is Laidlaw. About the only other thing we can say confidently is that how a court decides is less crucial the larger $x$ is, because less behavior is at stake.

Beyond this point, to advise a court, we require the cost of getting values of $x$ and $y$, as well as information about the density function of cases in the plane. For example, if $y$ is usually close to
1 and litigating values of $y$ is expensive individually, as a practical matter Kronman's article is largely correct. This argument mimics that by Kronman supporting the *Restatement*’s result in the jewel case. It does not persuade here either: why should we think that its presuppositions, especially the first, hold?

The law affects only private return. Ideally, it should reduce the level of private return to that of social return or, for that matter, increase private return to the level of social return. The way the issue is usually put—winner take all—requires the law either to leave private return alone, by deciding for $A$, or to eliminate private return by deciding against $A$. Contract law either does not change the ratio of social return to private return or makes this ratio infinitely large. Kronman’s article argues that in cases in which $x$ is small, the first result, reached by deciding for $A$, is better.

The trouble with cases concerning deliberate search is not a lack of economic factors at work in them or an absence of allocative reasons to decide for $A$ or $B$. At least one reason exists; two if we read the article charitably. Take the second reading first. The diagram’s two dimensions suggest it. The two factors cut oppositely, however, so evaluated together they direct policy equivocally.

If only one factor exists, it is not what Kronman imagines it is. His article shows that the law can control our investment in information through its rule for cases of deliberate search. That is its contribution; it should stop there instead of deciding policy. How to optimize this investment is a different question that is subsequent to his analysis, and which depends on the ratio of social return to private return.

If plotted along the $x$ axis, by mode of acquisition, the outcomes in unilateral mistake cases could vary randomly for two reasons. First, courts could be deciding a case consciously or unconsciously by its $y$ value, and $x$ and $y$ could be uncorrelated. Second, decisions might actually be random, as might happen if courts cannot tell what to do economically. Do the mistake cases as Kronman

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76. More exactly, the ratio becomes undefined because division by zero is undefined.
77. See *supra* pt. I, § C.
reports them, the raw data, constrain his reader to reject the null hypothesis that they are randomly distributed?78

IV. THE PRISONER'S DILEMMA

That is not the worst of it. Laidlaw, or B, hardly sits still for all this. Or, as Kronman states in his article:

Denying the buyer a property right in deliberately acquired information will therefore discourage both buyers and sellers from investing in the development of expertise and in the actual search for information. The assignment of such a right will not only protect the investment of the party possessing the special knowledge, it will also impose an opportunity cost on the other party and thus give him an incentive to undertake a (cost-justified) search of his own.79

The parenthetical, if it is not to announce a non sequitur, must rely on Smith's theorem.80 Part II contended that this theorem is unavailable here. For one contracting party to undertake a search is likely not optimal. Kronman celebrates that both parties search, which is likely less optimal.

Parametric choice “takes [one’s] behavior to be the sole variable in a fixed environment.”81 Strategic choice, in contrast, “takes [one’s] behavior to be but one variable among others, so that [one’s] choice must be responsive to [one’s] expectations of others’ choices, while their choices are similarly responsive to their expectations.”82 Until now this Article has treated parametric choice; part IV, however, treats strategic choice.

A will pay up to $1 for $1: that is parametric choice. A, B, . . . , bidding for $1 in circumstances of strategic choice, may bid much higher. Imagine an auction as follows. The highest bidder gets $1 and pays nothing. The second highest bidder gets nothing and pays his bid. No one may bid more than his wealth. Bidders may not confer. So A bids $.01 and B bids $.02. Then A must rebid or lose his investment. The bidding proceeds right past $1, because

78. See supra text accompanying notes 32-33.
79. Kronman, supra note 2, at 16.
80. See supra text accompanying note 3.
82. Id.
with A's bid at $.99 and B's at $1, A must still rebid or lose. In laboratory auctions, with wealth restricted to previous winnings in other experiments, the highest and second highest bids ranged from $2 and $1.51 to $27 and $20. The experimenter remarks laconically: "On the average, people lost a great deal of money."83

The game's relevance for unilateral mistake is that even if, B aside, A's marginal return equals the social return, A's factoring in of B's actions might separate these quantities. Some new considerations thus appear. Section A of part IV redescribes the situation of the contracting parties as a Prisoner's Dilemma. Section B relates this game to contract law generally. Finally, section C surveys ways out of the Prisoner's Dilemma when information is at stake, ways that may be within or outside contract law.

A. Deliberate Search as Pareto Inferior

Here is an intuitively clear case. A and B are horse trading and neither knows much about horses. A thinks thus:

The best outcome is for me to study horses while B stays ignorant; then I can beat her. The second best outcome is for us to trade ignorantly, because acquiring information is expensive. Third best, or second worst, would be if we both study. We will likely end up about where we will if we both stay ignorant, except that we will be poorer by our investment in information. The worst outcome is for B to study horses and me not to; then she will take advantage of me.

Of course, B thinks identically.

Both A and B want to be ringers and each hopes her counterpart is not. The matrix below represents their situation. The pairs of numbers display A's and B's preferences, with 1 indicating the most preferred and 4 the least preferred outcome. A's preferences are stated first.

\[
\begin{array}{c|cc}
 & B \text{ is ignorant} & B \text{ is a ringer} \\
\hline
A \text{ is ignorant} & 2,2 & 4,1 \\
A \text{ is a ringer} & 1,4 & 3,3 \\
\end{array}
\]

A and B each have a choice to be ignorant or to be a ringer. What does each do? Imagine A deciding. She thinks the probability that B will be a ringer is p. If p = 1, she must choose to be a ringer too so she will get preference 3 and not 4. If, instead, p = 0, she will still choose to be a ringer, getting preference 1, not 2. Any outcome can be built up by combining p = 1 and p = 0. Hence for any value of p, A will be a ringer. Of course, B thinks as A does. Each, then, will be a ringer. Contract aside for a moment, it matters not at all to this result that each persuades the other, by promise or otherwise, that she will stay ignorant. Each still anticipates only that she will be able to exploit the other. The equilibrium outcome, then, is at the lower right of the matrix, and is preferred third by both A and B.

An outcome is Pareto optimal if no other outcome is better for one player without being worse for the other. The equilibrium outcome, with both A and B being ringers, is the only outcome that is not Pareto optimal. It is not because A and B both prefer being ignorant. This combination—2,2—dominates the 3,3 double-ringer combination. Every game with this pattern of preferences—including the jewel case, Laidlaw, and all other cases of unilateral mistake—is a Prisoner’s Dilemma, “the most famous structure in the theory of games.”

The reader of Kronman’s article, lawyer or not, could see this coming. Early on, A and B were in a race for information. The situation parallels any number of situations that are Prisoner’s Dilemmas. Two example should suffice: the arms race and intercorporate litigation. Nobody believes the arms race is Pareto optimal, but each player is doing the best it can. Respecting litigation, the squandering of talent by overinvesting in law has recently been criticized. It perhaps pays a litigating corporation to hire the best

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legal advice, but this does not imply that corporations who are parties to a dispute would not both be better off by each investing less. In this case too, the move from parametric to strategic choice changes things. From a social point of view, individuals who have the ability to do medical research or something else with an unequivocal social product study law instead, join rival firms, and cancel each other out.  

B. The Prisoner’s Dilemma and Contract

The Prisoner’s Dilemma is a strange predicament for A and B. Contract law and the Prisoner’s Dilemma are ordinarily intimately but differently connected. Contract law normally solves Prisoner’s Dilemmas, it does not create them. Indeed, A and B would not be where they are, stuck on unilateral mistake, unless contract law had shepherded them through two layers of Prisoner’s Dilemmas.

At the first level is the social contract. According to Hobbes, life was formerly, in the state of nature, “solitary, poor, nasty, brutish, and short.” Individuals covenant to escape the state of nature, but then want to violate their covenants, because they have fallen into a Prisoner’s Dilemma. The game they play is as previously illustrated, except the rows are labelled ‘A does not breach’ and ‘A breaches’, and the columns likewise, substituting B for A. The equilibrium outcome of the game is that A and B both breach. They are still in a state of nature.

A and B then appoint a sovereign who threatens bad things if they breach. Say he threatens to kill them. That changes the character of the game, and the choices ‘A breaches’ and ‘B breaches’

87. Hobbes does not use the expression ‘Prisoner’s Dilemma’, but he clearly sets out the pattern. Leviathan, if read closely, does not make A’s and B’s interests that irreconcilable. See id. at 133-34. As modern scholarship reconstructs Hobbes, he observes that if A, B, . . . play the Prisoner’s Dilemma repeatedly, they play a different game, the Iterated Prisoner’s Dilemma. Here, most simply, it pays not to breach, because the other party will retaliate; that is, breach back. D. Gauthier, The Logic of Leviathan 83-85 (1969). The difference between the games explains the presence of so many construction cases in contracts casebooks. Construction contracts often are one-time affairs, lacking the constraint on breach of a continuing relation.
become highly disfavored. As a result, A and B keep their covenant. A blood oath works if there is a Mafia. Keeping the covenant lets A and B enjoy their second-best payoffs, 2,2, instead of suffering 3,3. Merely threatening the sanction changes the players' behavior; the sovereign need not impose it, unless to establish credibility.

Hence A and B are now in a society, not a state of nature. They are confronting contract law writ small, not the social contract. These are not entirely distinct conceptually; heuristically, however, it helps to address private contract with the sovereign already in place. Still, the social contract ought not just vanish from our consideration. A statute frequently is not so much corrective of a social wrong as it is a compromise between competing interest groups. As such, it looks like and ought to be construed like a contract. It has ingredients of both private and social contract.

A and B can interact without getting into a Prisoner's Dilemma if they barter — that is, exchange — and so avoid promises. But a contract, or, prelegally, an agreement, is a promise, with concomitant temptations to break it. Every contract solves a Prisoner's Dilemma.

Nothing is esoteric about legal practice here, as illustrations of the Prisoner's Dilemma by scholars who are innocent of the law—economists or philosophers—make clear. Here is a philosopher teaching the game:

Consider an economic transaction in which you agree to provide money in exchange for a car. Suppose, however, that the delivery of each takes time. The present owner will not know that he is getting his money until after he has shipped the car; you will not know that you are getting the car until the money is sent. But you need the car more than the money, and he needs the money more than the car. Will the transaction take place?

The author intends the question to be rhetorical. Without law, the transaction will not take place. Observe how carefully, by means of

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89. Restatement (Second) of Contracts § 1 (1981).
'delivery . . . takes time', he excludes barter. In circumstances like these, however, either the parties' legal advisors or the institution of contract unmediated by professionals routinely changes the game from the Prisoner's Dilemma.

Examine a representation of the ordinary commercial game, in which the numerals state payoffs in dollars instead of ranking outcomes. For instance, '1,1' indicates that the payoffs to A and B are $1 (or $1,000,000) each if neither breaches. The payoffs must be stated in a medium of exchange because contract law awards damages. Simply providing the order of the parties' preferences does not allow one to indicate interparty transfers. As before, without a contract, A and B breach, achieving -1,-1.

<table>
<thead>
<tr>
<th>B does not breach</th>
<th>B breaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>A does not breach</td>
<td>1,1</td>
</tr>
<tr>
<td>A breaches</td>
<td>2,-2</td>
</tr>
</tbody>
</table>

Contract law does nothing if both breach or neither breaches. Otherwise, it operates on the Prisoner's Dilemma as follows. Imagine that only A breaches, so that the parties are at the lower left outcome. The relevant legal rule, which gives expectation damages, assures B of the payoff she would obtain were A not to breach: one. Before the law awards her damages, B has minus two, so the law transfers three to her (-2 + 3 = 1). A finances the payment; the law extracts the three from A, leaving her with minus one. Mutatis mutandis if B breaches. The transformation the law works is: 

\[
\begin{align*}
1,1 & \quad -2,2 \\
-2,2 & \quad -1,-1 \\
\end{align*}
\]

\[
\begin{align*}
1,1 & \quad 1,-1 \\
1,1 & \quad -1,-1 \\
\end{align*}
\]

In this game the equilibrium outcome is the upper left, and is Pareto superior.

What if breach by A is efficient, so that contract law wants her to breach? Then the original payoffs for the lower left outcome are not 2,-2, but at least 5,-2. Breach can be efficient only if the sum of the payoffs that result from breach—for instance, 5 - 2 = 3—exceeds their sum if no breach occurs; here, 1 + 1 = 2. The adjusted game is still a Prisoner's Dilemma. The law imposes expectation damages here as well but solves the Prisoner's Dilemma differently. Again A pays three to B. Now, however, the payoffs are 2,1 if
A breaches and B does not. In the revised game only this outcome is Pareto optimal. The expectation measure of damages encourages A to breach because after compensating B she has two, not one, which she gets by not breaching. A promotes the social good by pursuing her own interest.

C. The Prisoner's Dilemma and Mistake

The law has gotten A and B past the social contract and the commercial contract that has no uncertainty. Why does it not take them all the way? The law would do so if A and B could contract out of the Prisoner's Dilemma discovered in section A, which comes from the prospect of unilateral mistake.

Contract provides general all-purpose relief from the Prisoner's Dilemma. Take the examples in section A. Contract fails in the arms race because it is unavailable, not because it is insufficient. Nations are in a state of nature, and by definition a contract does not exist sans a sovereign. Conversely, corporations can reduce legal costs by contracting to arbitrate; because they are under law, contract can serve them.91

The problem at the level of practice is a drafting problem. Picture Organ and Laidlaw's agent negotiating. The agent actually "asked if there was any news which was calculated to enhance the price or value of the article about to be purchased."92 Organ did not reply. The trial court had to decide if that was an imposition. Before contracting, Laidlaw's agent might have—should have—required Organ to warrant that there was no such news.

That is the easy case. The occurrence of the Prisoner's Dilemma in mistake cases and cases with contexts narrowly like mistake93 can be distinguished from its appearance in other contracting contexts that are routinely solved by contract. The distinguishing fea-

91. For a strong statement that parties who contract to arbitrate signal that they want to economize and that courts should protect their election, see Hill v. Norfolk & W. Ry., 814 F.2d 1192 (7th Cir. 1987) (Posner, J.).
92. Laidlaw v. Organ, 15 U.S. (2 Wheat.) 178, 183 (1817). Although the record states that peace was unexpected, the inquiry suggests the parties understood it to be more than a remote possibility. Id.
93. The feature appears also in impossibility, impracticability, or frustration cases, with similar unfortunate effects. See Posner & Rosenfield, Impossibility and Related Doctrines in Contract Law: An Economic Analysis, 6 J. LEGAL STUD. 83, 84-88 (1977).
ture is the difficulty of saying what the parties are trying to contract out of. A contract is words or the expressing of them, but in an interesting sense a party cannot say what she is mistaken about, because if she could, she could avoid the mistake. Nor is the language of a contract itself transparent, so that if parties knew everything they could make their contract say what they intend.

One pictures, rather beguilingly, a contracting process that progressively induces greater particularity of thought and expression. This process dissipates some Prisoner’s Dilemmas but creates others. The sequence of Prisoner’s Dilemmas may be infinite, or the cost of dissipating them may become infinite. If so, life or language is just that contingent; one can contract out of neither, because contract is embedded in both. The ordinary, less posturing way to say this is to state the obvious: parties cannot say everything in their contract. The ‘cannot’ may reflect either physical or economic impossibility. To revert to the idiom of law and economics, parties invest in clarifying their contract until the gain at the margin from clarification equals the cost. They are willing to live with whatever Prisoner’s Dilemmas are left.

The market helps. Each participant in an arms race requires its own hardware; one missile cannot be aimed at both parties. Contracting parties, in contrast, can have the same information, even though they cannot reciprocally exploit each other with it. The consequent economies of scale encourage third-party vendors. C can efficiently produce and sell the same information at once to A and B. Such C’s include Moody’s and Standard and Poor’s; The Wall Street Journal; and, closer to home, West Publishing Company. Again the relief is by contract, even if outside the contract between A and B. A and B supply the information to each other as a kind of warranty.

V. Conclusion

Imagine that an experimenter feeds a subject a randomly generated sequence of numbers: 3, 17, . . . . She requests that the subject identify the rule that generates them. Of course, no rule exists; the experimenter used a random-number table. Nevertheless, the subject will identify the rule, or at least she will report a rule. Any sequence is consistent with infinitely many rules. The interesting result, however, is that the subject becomes psychologically ad-
dicted to her rule. Indeed she may deny that a proffered number belongs to the sequence, postulating observational error. When the experimenter reveals that no rule exists, the subject disbelieves her.

Something of the sort may have happened with Kronman’s article. The article perceives a pattern in the case law and offers an economic justification for it. But the economics of unilateral mistake, given what we know about it, is an inconclusive guide to the law. Nor does the economics bear out the article’s theory. Conceivably, Kronman imposes his own rule, built on the distinction between deliberate search and casual acquisition, on a body of case law randomly generated with respect to that variable.

This Article has argued as follows. Kronman’s article is remarkably insightful. What remains to be said attests to its richness. The article reveals that investment in information is responsive to the legal rule for mistake. Then it reads the law to protect the product of deliberate search for the purpose of increasing this investment. The article’s analysis, however, is insensitive to the peril of overinvestment.

Markets may not always work. When they do not, a Prisoner’s Dilemma seems always in the background, at least in the sense that the problem can be informatively analyzed in terms of one, as has been done here. This, however, may not always be so, for prolonged study of the Prisoner’s Dilemma induces one to see only this pattern and see it everywhere. It may be a shallow view nonetheless that in the problem at hand, that of unilateral mistake, imperfect information causes the trouble in the first instance, independently of the Prisoner’s Dilemma.