

LEGAL UNCERTAINTY, by Anthony D'Amato (71 California Law Review 1, 1983)
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Legal certainty decreases over time. Rules and principles of law become more and more uncertain in content and in application because legal systems are biased in favor of unravelling those rules and principles. In Part I of this Article, I attempt to show what these biases are, and why commentators who have argued that the law tends toward certainty are wrong. Part II describes various attempts which have been made at restoring certainty, and why these attempts have generally not worked. My conclusion is that these proposals are at best holding actions, and that the tendency toward increasing uncertainty in the law is inexorable.

Several definitions are necessary at the outset. By "law," I mean not some metaphysical abstraction, but rather what the law means to the average person: a prediction of official behavioral reaction to what she plans to do (or avoid doing). [FN1] Thus, if a potential litigant, Irma, consults with several attorneys regarding the likelihood of successfully suing her cohabitor Jack for "palimony," the "law" to Irma is the attorneys' informed prediction. [FN2] If they tell her that she has an 0.9 chance of winning, we can say that the law of palimony is quite certain as applied to the facts of Irma's case. At 0.7 it is less certain, while a prediction at 0.5 would indicate that the law of palimony gives no basis for predicting whether Irma will win or lose. If the lawyers' predictions fall below 0.5, the law becomes increasingly certain that Irma will lose. At zero, we would say with certainty that there is no cause of action for palimony. [FN3]

Accordingly, by "legal uncertainty" I mean the situation that obtains when the rule that is relevant to a given act or transaction is said by informed attorneys to have an expected official outcome at or near the 0.5 level of predictability. [FN4] Legal uncertainty increases as more and more rules approach the 0.5 level. A more complex relation exists as the prediction moves downward from 0.5 to zero. Below 0.5, legal certainty increases as a given rule becomes extinguished, but also decreases as other rules are relied upon or created to take the place of the extinguished rules. [FN5] My contention in this Article is that lawyers' ability to predict for clients how their actual or potential cases would be resolved by a court is becoming increasingly uncertain.

I will use the term "rule" in a very loose and expanded sense. [FN6] By "rule" I mean not only a particular rule of law, such as a subsection of the Internal Revenue Code or the Rule in Shelley's Case, but also any principle, policy, theory, or other legal argument that can be cited by a party or potential party to a case as a reason why the judge or other official decisionmaker should decide the case in favor of that party. Although this is a broad definition, it does not include all conceivable arguments. For example, the argument "God told me to do it" will not, in the American legal system, "count" as an argument in favor of the arsonist or terrorist. Or consider the American legal realist claim that extralegal factors may be crucial in the judge's decisionmaking. [FN7] If an attorney for a landlord argues, "You always decide for landlords when you've had poached eggs for breakfast, and thus you should decide in favor of my client today," the judge will consider

the argument irrelevant (if not downright annoying) even if (or particularly if) the attorney can prove a 100 percent past correlation between poached eggs and victories for landlords.

Thus, when I say in the present Article that the plaintiff is relying on a rule in a given case, I mean that she has selected out of all the legal arguments available to her the most favorable rule of law, principle, policy, or theory [FN8] that "counts" in the legal system as a potential reason for awarding her the decision. [FN9] When I argue that rules unravel over time, I mean that, using any of these extended definitions of the term, a "rule" becomes increasingly vague, inapplicable, remote, ambiguous, or exception-ridden. This can happen in one of two ways.

First, rules may become more uncertain "on the books." For example, a statute that seemed to mean one thing may be construed by a court to mean something different. Although the court will usually say that it is clarifying the statute, it does not always do so. It may create an exception, an exemption, a privilege; it might construe the rule narrowly to avoid constitutional problems, or broadly to give effect to an unnoticed legislative intent buried in the legislative history. The court's decision becomes a part of the meaning of the rule, so that the rule now becomes more complex-it is a statute plus a judicial decision. The more complex rule may invite further adjudication and more inventive subsequent constructions by courts.

The "law on the books" may also become increasingly uncertain due to the legislative process itself. Persons disadvantaged by existing rules may lobby to get new statutes passed that create exceptions, exemptions, or privileges, or to get "special legislation" of other kinds. These also render the law more complex and convoluted: witness the innumerable tax provisions and regulations, many enacted at the behest of special interest groups, that clog up the Internal Revenue Code and sometimes render it internally inconsistent.

The second way rules may become more uncertain is in their application. Persons "disadvantaged" by existing rules may modify their activity so that it falls in the cracks between existing rules or comes more ambiguously within any given rule. Thus, although the rules "on the books" remain unchanged, if people change their conduct so that existing rules less clearly apply to what they do, we can say that overall the law has become less certain.

One may ask, however, whether uncertainty in the law is undesirable. Although I contend that it is, in some cases it might not be. Consider how an anti-gambling statute could apply to arcade pinball machines. [FN10] Legal experts might agree that if an arcade owner were prosecuted, there is an 0.5 chance that his machines would be held to be gambling devices-in short, total uncertainty. The state might well be contented with the partial deterrence that an untested application of the anti-gambling law would afford to the use of pinball machines. Some store owners would take a risk to make such games available to the public, while their risk-averse colleagues would avoid the games. The

resulting lesser level of usage might be tolerable from the state's viewpoint.

Yet outside of the criminal law area, uncertain law may deter activity that the state wants to encourage. If rules relating to sales, commercial paper, negotiable instruments, deeds, wills, and the like approach the 0.5 level of complete uncertainty, the underlying commercial activities will be deterred if not stifled. As Max Weber early demonstrated, legal certainty is necessary for capitalist progress. [FN11]

What is really undesirable about uncertain rules of law is that they leave persons unsure of their entitlements while affording unfettered discretion to official decisionmakers. A rule that is close to the 0.5 level (we need not assume mathematical exactitude at 0.5 for these arguments to apply) makes it impossible or nearly impossible for persons to plan their activities in light of such a rule. The rule points equally to a decision for claimant or for respondent if the activity is challenged in court. The judge is not compelled by precedent or reason to hold either way, a fact that may leave him more susceptible to extralegal influences (bias, prejudice, corruption) that silently could tip the scale. An appellate court also may rule either way, upholding or reversing the judge at its whim. The parties will have no justifiable expectation of a decision one way or the other. [FN12]

Thus, a major problem with legal uncertainty is that as rules approach the 0.5 level, we may move from a society under law to a regime of official discretion. In the next Part, I shall attempt to show that in practice, legal systems are pushed in the direction of total uncertainty. But the processes of legal dissolution may be slowed considerably if certain kinds of action are taken; some of these will be described in the last Part.

A final introductory word is in order. If law is becoming increasingly uncertain, why is that fact not immediately evident to all observers? I believe that the evidence that law is becoming more uncertain is indeed obvious, but to see it may require for many persons a gestalt shift in perspective. [FN13] The evidence must be examined in a different and perhaps unsettling way. For at the present time, practitioners of the law have a deep psychological investment in the assumption that their activities render the law increasingly certain.

Examples of this abound in everyday life. A judge may think that his recent decision has clarified the previously unsettled law. A scholar may believe that her new theory explains cases that seemed to be inconsistent, and that the explanation in turn will serve as a clarifying guideline for future decisions. A legislator might feel that a new statute will close a loophole, clarify an ambiguity, or provide clear guidance in a hitherto murky field. Perhaps practicing lawyers are less likely to believe that the law is getting more certain, although they too may want to believe otherwise as they get older. In my opinion, however, these beliefs are rationalizations based on a need to perceive that one's activities are helping to promote increasing order and rationality in society.

The evidence that the law is becoming more uncertain is all around us; the question is how to interpret it. For example, one might look at the increasing growth in reported judicial

decisions, statutes, and regulations as an increasingly successful attempt to impose precision upon human activities. One might see in the verbosity of the multi-volumed set of the Code of Federal Regulations rules of sophistication, detail, and clarity. But I would regard those same volumes as a futile and sometimes mad attempt to encapsulate real-world transactions in elusive and ambiguous legal prose. Indeed, I would contend that the increasing volume of litigation and rulemaking results in internal contradictions, a multiplication of ambiguities, and normative specifications that invite persons to avoid rules of law by planning their activities around them.

If there are two ways of looking at the same evidence, I cannot by mere rhetoric convince the reader that the evidence demonstrates a failure of the law to apply with certainty to human affairs. Instead, I must show that forces within the legal system operate over time to render the law increasingly uncertain. If this Article succeeds in demonstrating that proposition, the reader may be receptive to a shift of perspective. The same evidence that once seemed to render the law more detailed and precise will instead appear to demonstrate the law's failure to become clearer and more predictable. Thus, a main objective of the present Article may be regarded as an argument for a change of paradigms.

I: LAW TENDS TOWARD GREATER UNCERTAINTY

In this Part, I attempt to show that commentators who have argued that the law becomes more certain have not done so successfully. I then suggest reasons why law, left to the normal processes of common law adjudication and statutory change and adjustment, in fact tends toward greater uncertainty. I argue that such a tendency exists entirely apart from the substantive content of particular rules.

A. Criticism of Arguments That Law is Becoming More Certain

The few scholars who have addressed the issue of legal uncertainty directly have argued that law tends toward certainty. [FN14] They picture the law as made up of a few broad, uncertain principles or standards that are repeatedly fractured in the fires of litigation into many particularized, certain rules.

1. Dworkin's Argument

Professor Dworkin, for example, has argued that in primitive legal systems judges may be confronted comparatively often with cases whose correct decisions are indeterminable—in his term, "ties." [FN15] A tie exists in Dworkin's view when in a primitive legal system neither plaintiff nor defendant can cite a rule requiring the court to hold in favor of either. On the other hand, Dworkin states, in an advanced legal system, one which "is thick with constitutional rules and practices, and dense with precedents and statutes," the antecedent probability of such "ties" is much lower and the predictability of the outcome therefore much higher. [FN16] The picture that emerges is of an increasingly fine-meshed web of rules that can answer with certainty all legal questions that may arise (though Herculean

efforts on the part of judges may sometimes be required). Although some uncertainty in the proof of factual matters remains, the principle is that as time passes, the law itself becomes more certain.

I contend that there are three defects in Dworkin's argument. First, merely adding to the number of cases, statutes, scholarly glosses, and other data of legal prediction does not ensure more certainty in the law. Such increasingly dense "legal information" can as easily confuse an issue as clarify it, and may also support conflicting resolutions. As any lawyer who has used American Jurisprudence or Corpus Juris Secundum knows, finding more law does not necessarily mean that the law which is already known will become any clearer. [FN17]

In addition, the sheer volume of reported cases makes it increasingly difficult for any one court in any one case to consider all relevant precedents. Moreover, the amount of money at stake puts a limit on the time that lawyers in the case can afford to spend on research. Increasingly crowded dockets put a similar limit on the time judges and their clerks spend on a given case. [FN18] As a result, there is an increasing likelihood that each new case will contradict relevant precedents that simply were not brought to the court's attention due to the shortage of time and money for legal research and judicial deliberation.

A second defect in Dworkin's notion is that the numerical expansion of legal rules does not necessarily mean that it is more likely that any future case will be exactly on point with one of the existing precedents. Dworkin's position assumes that the growth in real-world transactions and transaction types does not outstrip the growth of rules and reported adjudicated cases. In fact, the complexity and variety of new types of personal and commercial interactions due to population growth, increasing education, and technological innovation may provide many new possibilities for legal disputes that fall outside reported precedents. [FN19] Additionally, people may readjust their activity because of a newly announced rule, [FN20] so that the rule is not often applied and therefore does not increase the certainty of the legal consequences of particular behavior. A new rule may indeed make a particular legal niche predictable, but perhaps few disputes will again present the sort of problem of which the rule was intended to dispose. [FN21]

At first blush there may be no reason to think that a law which is carefully constructed to solve some specific problem cannot apply with certainty to prospective behavior. But a closer look shows that potential litigants who find themselves in a situation to which a specific rule applies, and who are disadvantaged by the operation of the rule, will try to readjust their real or apparent behavior to avoid the rule's application while substantially preserving their personal goals.

When something of sufficient value to warrant hiring a lawyer is at stake, there usually will appear ways for the client to adjust his conduct to make application of the rule less likely. In addition, a lawyer may suggest ways of characterizing the activity to make it appear to be different from what it actually is. Indeed, the lawyer's job is to apply years of training and experience in manipulating language to further the client's interests. [FN22]

Compliance with estate tax laws, for example, may be virtually voluntary given the operation of the loopholes that lawyers seem repeatedly to open despite Congress' best efforts at reform. [FN23] Law is thus malleable; I use tax loopholes as an example only because they comprise a well-known area in which uncertainty flourishes despite massive efforts to extinguish it. [FN24]

Third, I object to Dworkin's thesis because primitive legal systems are not necessarily more likely to produce "ties" than modern ones and therefore are not necessarily more uncertain. Even underdeveloped legal systems seldom suffer from an inability to choose a winning party, because all legal systems develop methods for allocating the burden of proof among the parties to a dispute. The side that fails to meet its burden of proof will lose a legal dispute. [FN25] Therefore, the fact that there is more law in mature systems is inconclusive in determining the frequency of ties. The important inquiry is whether the greater amount of legal information in mature legal systems allows for greater certainty of the application of that legal information to the adjudication of disputes. As I shall show, the promulgation of more legal rules does not result in greater certainty: it may have just the opposite effect. [FN26]

2. Landes' and Posner's Argument

A different sort of theory from Dworkin's, leading to the same conclusion that law becomes more certain, has been advanced by Professors William Landes and Richard Posner. [FN27] They liken the corpus of law as contained in judicial decisions to the economic notion of a "capital stock." A system with a larger and newer capital stock corresponds to a legal system that contains a great deal of law. Such a system, they assert, results in greater legal certainty.

Their model is subject to the first two of my three criticisms of the Dworkin view: first, more law may mean only more confusion, not necessarily more certainty, [FN28] and second, precedents do not necessarily catch up to conduct inasmuch as real-world situations are constantly changing while people readjust their behavior to avoid rules and precedents they dislike.

Landes and Posner, however, go farther than Dworkin and argue that two phenomena affecting the capital stock of precedent—depreciation and new investment—work in opposition to one another to maintain an "equilibrium" of certainty in the law. First, they argue, precedent depreciates over time; its informational value declines because of changing circumstances. In particular, Landes and Posner argue that the value of precedent as a source of legal doctrine is reduced by changes in social and economic conditions, in legislation, in judicial personnel, and in other parameters of legal action. [FN29]

Second, opposing the force of precedential depreciation is constant new investment. Landes and Posner describe a "production function" of legal precedents, which senses the level of uncertainty and counteracts it to restore certainty. The production function is

keyed to the likelihood of litigation, as opposed to settling legal disputes. When in a given case the controlling precedent is depreciated and the outcome is therefore somewhat uncertain, parties will differ in their predictions of the outcome and accordingly will be more likely to litigate their dispute to a conclusion, thus creating a precedent or one of a string of precedents that will settle the issue and restore certainty by raising the stock of legal capital back to the desired level. [FN30]

In order for the new investment mechanism to sustain the desired level of certainty, Landes and Posner posit the existence of a systemic bias that affects parties' decisions about whether to settle or to go forward with the trial. Their suggested bias is simply that the more uncertain the law, the more likely are the disputants to litigate rather than to settle because their estimates of the probable outcome diverge. The fruit of litigation—the decision of the case—in turn makes the law certain for everyone else. [FN31] Since this posited systemic bias (and the conclusions derived from it) seem to have been widely accepted in the economic analysis of law community, [FN32] they deserve close examination.

I contend that Landes' and Posner's conclusions that the depreciation of legal precedent makes litigation more likely, and that the result of that litigation makes the law more certain, do not follow from their premises. In any event, there are significant omissions in their model that point to an opposite conclusion.

Let us begin by examining what the authors mean by "uncertainty." It is defined in an earlier article by Posner as "the variance between the parties' estimates of the probability of prevailing and the true probability." [FN33] I might illustrate this definition of certainty in numerical terms. Assume that plaintiff's attorneys believe that the plaintiff has a 0.7 probability of winning whereas the defendant's attorneys think that the plaintiff has only a 0.4 probability of winning. Then, the parties' estimates of the outcome are different. Because both parties believe that they would prevail in litigation, they will expect too much from each other by way of settlement, and will probably litigate. [FN34] Thus Landes and Posner have defined what we might call lawyers' uncertainty, [FN35] since the uncertainty results from different lawyers reaching different conclusions as to a given legal question. [FN36]

a. Does Lawyers' Uncertainty Increase as Precedents "Depreciate"?

Landes' and Posner's conclusion that lawyers' uncertainty is greater when precedents have been depreciated does not follow from their premises. The ambiguity of depreciated legal precedent does not in itself cause divergence in lawyers' predictions, because lawyers will take into account each other's possible reactions to the same precedent. Similarly, the existence of recent, nondepreciated precedent does not guarantee that lawyers will not differ in their estimations of its clarity.

To illustrate, suppose a plaintiff relies on a depreciated horse-and-buggy precedent in an automobile accident. Her lawyers believe that the precedent, standing alone, gives her a

0.6 chance of winning the legal action. The defendant's lawyers, examining the same precedent, and relying on quite similar training in law school, using similar research tools, and perhaps receiving signals from the plaintiff's lawyers on how strongly they feel about the case, may similarly arrive at the conclusion that the horse-and-buggy precedent gives the plaintiff only a 0.6 chance of winning. If we now substitute a recent Chrysler precedent in the plaintiff's Chevrolet accident, the plaintiff's lawyers may believe they have a 0.95 chance of winning and the defendant's lawyers might well agree that the plaintiff's chance of winning is 0.95.

In both cases, then, the lawyers agree; the degree to which the precedent has depreciated is immaterial to the determination of lawyers' uncertainty. Indeed, one could argue that the newer and clearer the precedent, the more likely is lawyers' divergence—the direct opposite of the Landes-Posner contention. [FN37] For lawyers are taught in law schools to recognize ambiguity in ambiguous precedents, on the one hand, and to create ambiguity in clear precedents on the other. I point out that clearer precedents might lead to greater lawyers' uncertainty, not so much to argue that this is the usual outcome, but to show that there is no a priori connection between depreciated legal capital stock and divergence in lawyers' certainty.

b. Does Greater Lawyers' Uncertainty Lead to More Litigation?

Landes' and Posner's conclusion that greater lawyers' uncertainty leads to a greater likelihood of litigation does not follow from their premises because their argument fails to take into account other influences that depreciation has upon parties' decisions to litigate or settle that would make settlement more likely.

One such influence is the parties' aversion to risk. Risk aversion decreases the chances of litigation. Suppose Irma sues Jack for A dollars and the lawyers for both parties differ as to Irma's chances of winning the suit if it goes to trial. Let P_{subI} , a number between zero and one, represent Irma's perception of her chances of winning, and P_{subJ} represent Jack's perception of Irma's chances. Then Irma expects to win $P_{subI} \times A$ dollars, and Jack expects to lose $P_{subJ} \times A$ dollars, if the action is tried.

But the risk involved in litigating as opposed to settling the dispute will affect this expectation to the extent that either party is disposed to avoid or seek out risk. Let R_{subI} represent Irma's aversion to the risk—that is, the dollar amount that Irma would pay or forego in order to avoid the risk of litigating her dispute against Jack. Let R_{subJ} represent Jack's risk aversion, or the amount that Jack would pay or forego to avoid the same litigation risk. [FN38] R_{subI} decreases Irma's expected win and R_{subJ} increases Jack's expected loss, with the result that both parties' incentives to litigate are decreased.

Another deterrent to the parties' incentive to litigate is the excess of the cost of litigating over the cost of settling the dispute. Let T_{subI} be Irma's trial costs (minus whatever it might cost her to negotiate a settlement) and T_{subJ} be Jack's trial costs (minus his costs of negotiating a settlement). Then the minimum amount Irma would accept to forego

litigation is $P_{subI} \times A - R_{subI} - T_{subI}$ and the maximum amount Jack would pay to avoid litigation is $P_{subJ} \times A + R_{subJ} + T_{subJ}$. If there exists a compromise amount, C , that is not greater than Jack's maximum settlement and not less than Irma's minimum settlement, then both parties should prefer settlement at C dollars to litigation. Of course, there may be many values C between Irma's minimum settlement and Jack's maximum settlement, and which value is chosen will depend upon the parties' bargaining ability. But the size of the compromise spread, measured by the sum of the parties' risk aversions and transaction costs adjusted by the amount of lawyers' uncertainty, or $C = (P_{subJ} \times A + R_{subJ} + T_{subJ}) - (P_{subI} \times A - R_{subI} - T_{subI}) = (P_{subJ} - P_{subI}) \times A + R_{subJ} + R_{subI} + T_{subJ} + T_{subI}$, gives us a good indication of how likely settlement is.

If I stopped here, I would be in substantial agreement with Landes and Posner: the parties are likely to settle except when they come to different estimates of the probable outcome. Yet to stop here is to assume that the terms R_{subJ} , R_{subI} , T_{subJ} , and T_{subI} , are independent of the parties' estimates of the probability of the outcome, P_{subI} and P_{subJ} . This assumption is incorrect for two reasons.

First, greater legal uncertainty would accentuate the parties' aversion to risk, increasing the spread of possible compromise amounts and making settlement more likely. Because the compromise spread can be written to combine the risk aversion terms as $(R_{subJ} + R_{subI})$, it is unnecessary to know whether either party is more risk averse when there is legal uncertainty. Rather, we are interested only in the probability at which the sum of the risk aversion, $(R_{subJ} + R_{subI})$, is maximized. This probability is 0.5 on certain plausible assumptions of symmetry and of diminishing effects of changes in the probability. [FN39]

Second, the costs to Jack and Irma of trying their case, T_{subJ} and T_{subI} , are greater when the law is more unpredictable, providing a further incentive for settling an uncertain dispute. Legal uncertainty should tend to make both legal and factual issues more difficult for the parties to research and present. Moreover, once an uncertain matter is adjudicated, an appeal by the losing party should be more likely, entailing further expense for both parties. [FN40] Thus the principal reasons for Jack and Irma to settle their dispute without litigation-to avoid the risk and expense of litigation- are most powerful when the law governing the dispute is less certain. [FN41] Not only have Landes and Posner failed to make their case, but the opposite of what they predicted may be true-litigation over more uncertain legal issues may be less likely than litigation over more certain issues because of the higher costs associated with uncertain litigation, resulting in a preference in the law for survival of uncertain legal issues. [FN42]

The conclusion that does follow from the Landes and Posner premises is that lawyers' certainty will be maintained at an equilibrium level. If we start with two opposing lawyers who have divergent optimistic predictions, the resulting litigation will in effect beat them into agreeing what the result is. [FN43] In short, it will educate them as to how they should have predicted the result. Lawyers' uncertainty, however, does not assure a high likelihood of litigation because, as we have seen, other influences exist to deter litigation.

So far I have shown that Dworkin and Posner and Landes incorrectly conclude that law tends toward greater certainty or self-corrects its uncertainty. The next Section shows why the law in fact is moving toward greater uncertainty.

B. Why Law Tends Toward Greater Uncertainty

I contend that incentives built into the legal system encourage various participants to make the law more uncertain. [FN44] This uncertainty can be generated in one of two ways. First, any given rule of law may itself be changed so that it approaches the 0.5 level of uncertainty whether it will or will not be applied to any given factual situation. Equivalently, factual situations may be manipulated so that they do not clearly fall under existing rules, to the end that existing rules cover such factual situations only with a 0.5 probability of affecting the legal rights of the parties.

Second, forces within the legal system may operate to push any given rule toward the zero point of total extinction. Although the result of the latter forces might at first blush appear to make the law more certain by eliminating some rules, in fact legal uncertainty increases because rules generally only approach extinction without reaching it, and because as any given rule approaches extinction, other rules arise to take its place. I will start by examining the first of these two ways of generating legal uncertainty.

1. Factors Impelling Rules Toward Complete Uncertainty

a. Maximizing Information Value.

Under information theory, the information value of any given message increases as the actual message diverges from the predicted message. [FN45] Because any lawyer's prediction of official legal reaction to a client's fact situation is a prediction of the content of the message that will be received from that official source, a result that contradicts the informed lawyer's prediction will have higher information value. I will now discuss why both official decisionmakers (judges) and commentators on the law (scholars) tend to maximize information value.

i. Judges. Some judges, whether consciously or not, desire status, fame, and greatness in their profession. Routinely following precedent and always acting predictably do not often lead to notice and acclaim. There is little "news value" in decisions that reach completely expected results. Moreover, by reaching predicted results, the judge adds little or nothing to the substantive content of the law, and thus the judge loses some of the gratification that would come from the feeling of "making a contribution" to the law. Hence, we can reasonably infer, in the aggregate, a self-interested tendency on the part of the judiciary to maximize the information value of its services, [FN46] which can be accomplished by rendering decisions against the party that was expected to win. Even if judges do this only a small part of the time, the net effect is still enough to constitute a force for rendering law increasingly uncertain.

Several objections might be raised to the foregoing contention. First, one might argue that

even though a judge might rule against Irma when the rule she relied upon had an antecedent probability of winning for her of greater than 0.5, nevertheless the judge will redress the uncertainty caused by this unexpected decision by writing an opinion that clarifies the law. The purported clarification, however, only creates the illusion of more certainty. For reasons similar to those in my discussion of Dworkin's theory, [FN47] adding to the world's stock of verbiage more likely reduces certainty than increases it. Think of any "leading" case in any field of law: did it mark an end to a particular path in litigation, or did it in fact spawn new streams of controversies? Nearly every lawyer's experience will substantiate the multiplier effect of prominent judicial decisions and the new uncertainties that result in their wake.

Secondly, one might object that judges cannot continually seek to upset decisional patterns without being severely criticized for refusing to follow precedent and, if they are lower court judges, without risking reversal on appeal. Indeed, the "gravitational force" of precedent, to use Dworkin's term, must be an influence upon judicial decisionmaking. [FN48] My response is that judges indeed strive to appear to follow precedent, and become quite adept-whether at the trial or appellate level-in couching their decisions so as to appear to find and not make law. At the same time, however, they can maximize informational value by deciding in favor of the party that was not expected to win.

Judges can do this by seizing upon facts in a case that purportedly make it "unique" or "different," and by adopting theories suggested by the defendant or by scholarly literature that justify an unprecedented decision because of those unique or different facts. [FN49] By selecting and emphasizing certain facts that comport with the result the court wants to reach, judges have considerable leeway to distinguish the case from an unwanted precedent. [FN50] By defining the issues in the present case as narrowly as possible, and by emphasizing specially selected facts, a court may characterize the present case as one of "first impression" unbounded by precedent. Indeed, it is psychologically appealing for a judge to "find" new law that no one had ever "found" before. Moreover, the law is replete with adjectives of permanent transience, such as "reasonable," "adequate," "proper," "due," and "practicable." Such terms afford the opportunity for discretionary decisionmaking while providing the appearance of non-creativity.

Finally, an objection might be made that even if the preceding considerations seem well-grounded, there is no evidence that judges consciously try to maximize the informational value of their decisions. But the process may not be a conscious one. Judges may subconsciously be trying to impress their law clerks or to fulfill the expectations of those who elected or appointed the judges to office by creating visibility for the judicial office, or they may simply believe that judging is such a precious commodity that, whenever possible, it should have an informative impact. [FN51]

ii. Scholars. Scholars, law review contributors, and other legal commentators have an effect upon the law by virtue of their theories purporting to explain or criticize cases, codes, regulations, and statutes. Many in this group perceive that they may advance professionally if their writings provide a great deal of information value. Other things

being equal, a professor of law will reap greater professional rewards by challenging the results of a line of cases or by stating a new theory than by merely restating the law. For a new theory has information value; a restatement, by contrast and almost by definition, is not noteworthy.

New theories which cast doubt upon the soundness of existing case law tend to get published more easily and disseminated more widely than do restatements. These new theories will therefore have a large impact upon the law due to the fact that judges read and respect academic writings. Moreover, such theories provide new sources of arguments for practitioners who represent clients who would be disadvantaged by the application of existing law.

To be sure, some scholars offer theories that attempt to simplify the law and make it more predictable. But despite their professed aim to introduce greater clarity and predictability into the law, academic theories of law simply add to the world's stock of theories without eliminating contradictory theories that came before them. The economic analysis of law school is one such example. [FN52] If in a given case Irma is advantaged by making an economic argument, Jack will defend by citing theories that criticize the economic viewpoint as overly narrow or unjust from a nonmarket perspective. Jack might also find an economist who will use economic jargon to reach precisely the opposite conclusion from Irma's.

In short, academic theories of law, however well-intentioned, collectively appear to result in increasing legal uncertainty.

b. Self-Interest of Litigants.

I now argue that the self-interest of litigants similarly results in a movement in the law toward complete uncertainty at the 0.5 level. I will take as a model our litigants Irma and Jack on the eve of their day in court. For present purposes, I will define their litigation to include the trial and any and all appeals. But I do not include prelitigation maneuvers, which I shall take up later, because of asymmetries in prelitigation efficiency in the modification of conduct.

On the eve of trial, Irma's and Jack's pretrial transaction costs (attorney's fees, depositions, trial preparation, court fees) have become sunk. Thus, Irma expects at most to recover the amount in damages for which she is suing Jack, and Jack fears at worst to lose the same amount. There is symmetry in their financial positions; it is at this point a zero-sum game. I will take up two possibilities: first, where Irma is relying on a rule that has a pretrial likelihood of greater than 0.5 of winning for her, and second, a rule that has less than that probability. For ease of illustration, let us suppose that the first rule has an 0.9 chance of winning for Irma, and the second has a chance of 0.1. Irma sues Jack for \$20,000 in damages.

In the case of a well-settled rule having an 0.9 chance of winning for Irma, her expected

value of recovery on the eve of trial is $0.9 \times \$20,000 = \$18,000$. Jack of course wants to lower this figure and settle with Irma at the lower figure, as that would reduce his expected loss of \$18,000. If, for example, Jack's lawyers can create confusion in the integrity of the rule or in its applicability to Jack's case such that Irma's lawyers would perceive that her chance of winning is reduced to 0.6, then the expected settlement amount would become $0.6 \times \$20,000 = \$12,000$.

Jack will therefore calculate, with the aid of his attorneys, the chances of pushing the rule down to the 0.6 level and the amount of additional investment he would have to make in attorneys' fees to have a good chance of accomplishing that result. He will pay some amount between 0 and \$6,000 to invest in this additional legal creativity. However, given the zero-sum nature of the confrontation, we can expect Irma to retaliate by investing an equivalent amount in her attorneys to counter Jack's strategy. If the nature of their legal positions were symmetrical, then there would be a standoff and we could expect no bias for moving the rule in either direction away from its 0.9 level.

But the positions are not symmetrical. I will now argue that Jack will be able to purchase more effective legal creativity than Irma for the same dollar amount, and that on balance, therefore, the court will hear more and better arguments for lowering the level of certainty of the rule. In the long run, over millions of cases, this additional creative advocacy on the side of reducing the certainty of rules that begin at a level above 0.5 will translate into judicial opinions that chip away at those rules and reduce the level of certainty in the law as a whole. [FN53]

First, it is easier for Jack's lawyers to attack the 0.9 rule than for Irma's attorneys to defend it. Recall that by "rule" I mean any legal reason (including all statutes, precedents, principles, and policies) favoring the person invoking the rule. Because all such rules are verbal, they apply only imprecisely to real-world events. [FN54] The more Jack's attorneys subject the rule to scrutiny, the more questionable the rule seems to become, and the less it seems to fit the real world. Moreover, his attorneys are not restricted to actual events that test the rule; they may also invent hypothetical cases where the application of the rule would work an injustice or would reach results not contemplated by the framers of the rule. The attorneys may also cast doubt upon the clarity, wisdom, inclusiveness, justice or constitutionality of the rule. They are "restricted" only by the complexity of the real world and their own imaginations.

On the other side, Irma's attorneys are faced with the difficulty of responding to all of the objections conjured up by Jack's attorneys. They have to respond to the objections to the rule's wording, constitutionality, congruence with justice, applicability to Jack's case, and applicability to all the imagined hypotheticals. They will realize that a judge will take the hypotheticals into account in assessing the legal status of the rule. [FN55]

To be sure, Irma's attorneys need not respond to each and every objection raised by Jack's attorneys. On the whole, however, it will be more time-consuming and difficult to answer the objections and defend the rule than it was for Jack's attorneys to invent the objections.

Most legal rules, after all, represent compromises of interests; they are not clear-cut formulations of eternal truths which are obviously just. Hence they are subject to attack, and are hard to defend. Irma's attorneys in short are in the difficult position of trying to prove a negative: that the rule should withstand any imagined onslaught. Jack's attorneys have the easier, and more cost-effective position: that various problems exist with the rule as it stands and as it may be applied.

Second, Jack's attorneys have the psychological advantage that the doubts they cast upon the rule or its application tend to linger in the mind of the court even if Irma's attorneys defend the integrity of the rule. Suspicion once planted is a sturdy seed, as we know from numerous courtroom examples where an "objection sustained" ruling by the court does not totally erase the prejudicial testimony that the jurors have just heard.

Third, the adversary system itself, by giving each party equal time for argument and equal page limits for briefs, inevitably favors the party with the poorer legal case. If we had to design the legal system afresh, we might allocate to Irma's attorneys an amount of time commensurate with the pretrial evaluation of the soundness of the rule upon which she relies. If the rule is at the 0.9 level, she should be allowed 90% of the presentation, and Jack only 10%. Of course, this system would be impractical, because it would require a pretrial determination of the probability of the rule's succeeding—a mini-trial in advance of every trial (and indeed, an infinite regress of mini-trials). Hence, in the interests of a rough-and-ready fairness, the system allocates presentation on a 50-50 basis. As a result, Jack's attorneys have much more opportunity to convince the court that the rule is dubious than the merits of Jack's case would recommend.

Fourth, judges dislike ruling totally for one side and giving the losing party nothing. Like all human decisionmakers, they tend to try to compromise disputes. [FN56] They dislike sending someone away from court with the feeling that the judicial machinery has been wholly unresponsive, partly for the purely pragmatic reason that the judicial system ultimately depends upon the tolerance of the citizenry, and thus in a sense the litigants are consumers of the judicial output. It is only natural for judges to try to maximize consumer satisfaction, and it follows that giving as many litigants as possible "something" for their efforts is better in terms of consumer satisfaction than having overly happy winners and disaffected losers. In written opinions, the court will at least give the losing party the courtesy of attention to its main contentions, and in many instances will go further and concede that there is some merit to the loser's arguments. Thus the door will be opened to future litigants to recontest the rule, particularly if they vary their factual situations slightly so as to appear not to fall exactly within the unfavorable precedent. Also, dissenting opinions serve to provide solace to the loser as well as a source of authoritative argument for future litigants in the loser's position who want to contest the rule of decision.

Finally, the previously mentioned tendency of judges to maximize the information value of their decisions works against Irma's chance of prevailing on her 0.9 rule. The judge may be predisposed to sympathize with the arguments advanced by Jack's attorneys that attack the existing law. [FN57]

Let us turn now to a rule that has only a 0.1 chance of winning for Irma. The reasons previously given that favor Jack's chances to whittle down the probability of a 0.9 rule now favor Irma in her attempt to boost up the 0.1 rule. First, her attorneys will argue, more cost-effectively than Jack's attorneys can defend, the proposition that the given rule will have many desirable applications in future imagined cases. Her attorneys will argue that the rule will help promote the interests of justice if adopted by the court, that it comports more soundly with fundamental constitutional principles than the arguments given by Jack's attorneys (who simply want to take advantage of the fact that the rule invoked by Irma has not yet matured within the legal system). Jack's attorneys now will be in the position of attempting to prove a negative—that the proffered rule will not have imaginable applications that are desirable. Irma's attorneys, on the other hand, are starting with a rule that is very low in status. To use an overworked phrase, they have nowhere to go but up.

Second, Irma's hypothetical cases of desirable application of the rule will cast seeds that cannot as effectively be trampled upon by Jack's attorneys. Third, the equal time allocated to Irma will give her a chance to build up her rule even though, a priori, she hardly had a cause of action in the first place. Fourth, the judge will now view Irma as an underdog who perhaps should not be totally denied the redress of the judicial system. Finally, the information value of the judicial decision, as previously described, will work to Irma's advantage because she is starting with the poorer case.

If as a result of the litigation dynamics I have described the parties settle the case, the rule "on the books" will not be changed. Even so, some attorneys will learn that the rule can be contested and that it does not have the vitality that a 0.9 level of predictability might suggest. However, if the parties proceed to judgment, then the rule "on the books" will be affected. The court might decide that Irma wins the 0.9 case, but language in the opinion might encourage future litigants situated closely to Jack to contest the rule. Or the court might decide in Jack's favor, thus throwing the rule into confusion. Attorneys would then have to assess the degree of uncertainty resulting from an apparently well entrenched rule being disconfirmed in the most recent case.

2. Forces that Impel Rules Towards Extinction

There is a second category of incentives built into the legal system that operate to the disadvantage of persons asserting claims. These factors will operate in the aggregate to lower the actual probability of the application of any rule. Because most claims that are asserted in legal proceedings are grounded upon rules that start out with a higher than 0.5 probability of being successful for the claimant, these factors will drive such rules downward toward the 0.5 level of complete uncertainty.

The observation that most asserted claims are based on rules having an initial probability level higher than 0.5 is based on common sense in the absence of available empirical evidence. If a potential claimant, Irma, has a choice, she will choose the rule that has the

best probability of winning for her, discarding the rules that have lower than an 0.5 probability attached to them. If the only rules available to fit the facts of her case have a lower than 0.5 probability of prevailing, she will tend to be discouraged from asserting the claim at all. Furthermore, if Irma's transaction costs are at least half of the value of her claim, she will be economically deterred from relying upon any rule that has less than an 0.5 probability of prevailing. [FN58]

Although claims on the whole tend to be based on rules above the 0.5 level, there will be occasional reliance on rules below that level. The factors I shall describe in this Section affect all rules regardless of their initial probability levels. Thus, the minority of asserted rules that begin with a less than 0.5 probability of succeeding will be driven downward toward the zero point. If such rules are extinguished at the zero level, would not the law become more certain because of the absence of those rules? My response is that rules hardly ever reach the point of extinction, and in fact become increasingly difficult to extinguish as they approach zero probability. (Mathematically, we might think of the downward curve as a hyperbolic function that never reaches the axis, offering increasing resistance to the forces that impel it toward zero.)

The reason that it is hard to extinguish totally a rule is that the rule arose in the first place as a response either to a claimed right or a claimed immunity of real persons in real situations. There is always a possibility that the law may again recognize those rights or immunities, and revitalize the rules. Even a repealed statute may be revived by a court that says the statute has become part of the common law (although technically, of course, it is the statutory rule and not the statute itself that is revitalized). [FN59] Legal systems as a whole may be viewed as mechanisms for averting anarchy: courts respond to grievances, real or imagined, between persons or between a person and the state because they perceive that if disputes are not settled in an orderly fashion, revolution and social anarchy would be the ultimate alternative. Hence "rules" are manifestations of judicial responses at some point in time to the resolution of private conflicts. They may be eclipsed by other rules as the legal system develops, but rarely are they extinguished altogether. They may achieve a low level of visibility, but it would take large financial resources to extinguish any one rule altogether, if the rule's extinction can ever be achieved.

Even if a particular rule of law is thoroughly discredited, the claimant who has or feels she has been harmed may invent a different rule to redress that grievance. New causes of action have risen historically out of the litigation process; the growth of the common law attests to the success claimants often have in inventing new rules. Indeed, claimants' ability to invent a new rule helps account for the hyperbolic curve I described above: as Jack succeeds in reducing Irma's rule down to the 0.1 level of probable application, he becomes increasingly reluctant to sink more capital into the enterprise of extinguishing the rule completely because of Irma's ability to shift to another low-visibility rule.

Accordingly, the forces that I shall now describe operate in the aggregate on rules above the 0.5 level to push them downward toward the 0.5 level of complete uncertainty. To the extent, however, that these forces also push rules at or below the 0.5 level toward zero,

such rules will rarely if ever reach zero. Thus they will remain low-probability rules which will occasionally, contrary to expectations, win for a claimant asserting them.

a. Avoiding the Application of a Rule

A legal rule may be viewed as a potential means for one person to use the legal system to gain something forcibly from another person. Let us again refer to Irma as a person or entity advantaged by a legal rule, and Jack as the person who would be disadvantaged if Irma utilized that rule in the context of the state's enforcement machinery (typically, a judicial proceeding). Previously I considered the Irma-Jack interaction in the context of a lawsuit that Irma had decided to initiate. Here I shall discuss the situation that obtains before Irma decides to litigate. My argument will be that, in the aggregate, persons in Jack's position will have a net financial incentive to render the law uncertain. In other words, I shall point out asymmetries between Irma's and Jack's situations that lead to a net investment in legal creativity on Jack's part. He will spend this money to make his pre-litigation conduct fall less certainly within the law on the books.

I contend that there are three categories of asymmetry in the prelitigation area. First, Jack has a net incentive to discourage Irma from bringing the legal action at all. Second, Jack can more efficiently widen the gap between his own conduct and the law on the books than Irma can restore it. Third, Jack's contemplated transaction costs will be less than Irma's, and hence he can spend the difference in the purchase of legal creativity to unravel the rules of law. All of these asymmetries lead to a systemic bias in favor of persons disadvantaged by legal rules to make the law less certain.

i. Discouraging Irma from Suing. My first argument may be summarized by this principle: the more uncertain the law, the greater the disincentive to the party advantaged by the law to initiate legal action. [FN60] I shall illustrate this principle by taking a simple case where the transaction costs (costs of filing a suit, service of process, legal services, secretarial, overhead, etc.) are high relative to the amount of claimed damages.

Suppose Jack, an investment adviser, is contemplating whether to mislead his client Irma about the risks associated with a \$5,000 investment he wants her to make. Jack's attorney advises him that if Irma loses her money, the "law on the books" would apply with an 0.9 degree of certainty of finding Jack liable for the full amount of Irma's loss. If Irma were to proceed with a lawsuit, her expected recovery would be her probability of winning multiplied by the amount of requested damages less her transaction costs. Assuming her total transaction costs to be \$3,000, her expected recovery would be $(0.9 \times \$5,000) - \$3,000 = \$1,500$. Jack's expected loss if Irma sues him would be higher. We will assume Jack's transaction costs to be the same as Irma's, namely, \$3,000. [FN61] The probability of his losing is equal to the probability of Irma's winning. Thus, Jack's expected loss would be $(0.9 \times \$5,000) + \$3,000 = ?500$.

In such a situation, Irma can generally be expected to sue Jack. She can expect to win \$1,500, and Jack can expect to lose \$7,500. The difference of \$6,000 is the amount of

transaction costs lost by both parties to the legal machinery. The same difference would obtain if this case were to take place under a "British" system in which the losing party pays the winner's transaction costs. [FN62]

Jack asks his attorney if he can avoid such a potential loss, and the attorney says that would be possible if Jack is willing to spend \$2,000 and alter his plans somewhat. The \$2,000 would be paid to the attorney for the latter's legal research and creativity in devising a strategy for Jack, and for drawing up certain documents that Jack will need. [FN63] If Jack pays the money and takes the attorney's advice, then the probability of Irma's winning might be reduced from 0.9 to 0.5. In that case, although Jack's expected loss would remain the same, $(0.5 \times \$5,000) + \$3,000 + \$2,000 = \$7,500$, Irma's expected gain would fall below zero, $(0.5 \times \$5,000) - \$3,000 = -\$500$. In other words, Irma would face an expected loss if she sued Jack. Irma might sue anyway, but her financial incentive would be to avoid suing.

So far I have only shown that by spending \$2,000, Jack may reduce Irma's expected recovery to less than zero. Yet is the situation asymmetrical? Suppose Irma contemplates spending \$2,000 to restore her probability of winning to 0.9. [FN64] Her expected recovery would then be $(0.9 \times \$5,000) - \$3,000 - \$2,000 = -\500 . Thus Irma's "matching" of Jack's expenditure would be futile, as her expected recovery remains negative.

Thus, I have demonstrated an asymmetry between the positions of Jack and Irma in this limiting situation. Jack has a net incentive to modify his conduct so that it falls less clearly within the relevant legal rule, and he will do so because the effect will be to discourage Irma from suing him. The aggregate of potentially disadvantaged persons in Jack's position will do the same, thus rendering their activities less likely to fall within existing legal rules. In short, the law on the books will apply less and less clearly to real-world transactions.

I have taken a simple case where money damages are low and transaction costs are high in relation to them. However, the same principle would apply to any case: that by reducing the probability that an adverse rule will be applied to his conduct, Jack is increasing the probability that Irma will be discouraged from undertaking the litigation. To be sure, as the amount of requested damages increases relative to the transaction costs, the inhibitory effect upon Irma will diminish. But it will never vanish entirely, as long as Jack knows he can decrease Irma's expected gain by forcing her to "match" his legal creativity. This is therefore a systemic feature operating to favor persons disadvantaged by rules. [FN65]

ii. Jack's Relative Efficiency in Modifying his Conduct. I now want to address the general question of the efficiency of modifying real-world activities so that they fall less certainly under existing rules of law. We assume that Jack is planning an activity that will make him better off and Irma worse off. No matter what Jack's activity might be, there will always be a legal rule that Irma can cite against Jack that has some degree of probability of winning for Irma. For example, if Jack fails to show up for a date with Irma, Irma might invoke a breach of contract rule against Jack. The chances of her succeeding may be

exceedingly remote, but they are not zero. As Jack sees it, his best strategy is to identify the best rule that Irma could cite against him, assess her probability of winning under that rule, and compare her expected win to the the gain that he would derive from going ahead with his planned activity. If the probability of her winning is significant, Jack may want to investigate whether he can reduce Irma's chance of prevailing against him in a lawsuit for less cost than his resulting gain in expected value.

In many circumstances there is a broad spectrum of "nearby" activities for the disadvantaged party that serve essentially the same purpose as the originally desired activity, but to which the adverse rule applies less certainly. For example, there are seemingly inexhaustible loopholes in the tax code; and while loopholes may involve costs in activity-modification and attorneys' fees, the fact that they are exploited means that taxpayers find them cost-effective. Other ways of avoiding adverse rules include sponsoring new legislation to change the rules, applying for a variance, requesting a private ruling from a governmental agency, creating a seemingly favorable "paper record" of a transaction, "burying" the transaction in footnotes to accountants' reports, sponsoring third-party litigation to test the constitutionality of the rule, and so forth.

My proposition is simply that in general it will be less costly for Jack to modify his planned activity than for Irma to prevent or undo the modification. For example, Jack can more easily "hide" his activities than Irma can hire private investigators to discover them. Jack can choose any one of hundreds of possible modifications of his activity; Irma can hardly monitor all of them in expectation that Jack will choose one. All efficiency considerations are on Jack's side because it is he who is initiating the modification in activity, whereas Irma is faced with either the very expensive task of trying to prevent Jack from modifying his activity or arguing that what he did should not have the legal consequence of reducing the applicability of the relevant rule. Thus if Jack spends \$1,000 in attorneys' fees and other costs to adjust a planned activity, it would in most cases cost Irma more than \$1,000 either to prevent Jack from making the adjustment or to hire attorneys to show that the adjustment lacks substantive significance in terms of the applicable rule. In general, Jack may purchase more legal creativity to modify his activities than Irma may purchase (at the same dollar amount) to prevent or undo Jack's activities. The result is that there is an ever widening gap between the rules of law on the books and the real-world activities engaged in by persons who would be disadvantaged by the application of those legal rules.

iii. Irma's Contemplated Transaction Costs Exceed Jack's. Finally, I propose that, in general, persons advantaged by legal rules will have higher transaction costs in litigation than persons disadvantaged by those rules. First, Irma usually must sue Jack in his home jurisdiction; this may involve substantial travel costs for Irma and substantial additional legal fees for local counsel. Next, Irma must file the lawsuit, which involves paying filing fees to the court. [FN66] In addition, she must pay for service of process. Jack, on the other hand, does not have to pay filing fees or the costs of a process server, as he may reply directly to the court and by mail to Irma's attorney.

Moreover, the costs of discovery and interrogatories are normally much heavier for Irma.

If she wants to inspect Jack's books, she must travel to his place of business, pay photocopying costs, and probably pay for an accountant to make a report. Jack, being on the defensive, has no comparable costs. If Irma wants to make written interrogatories, she must pay for her attorney's time in imagining and framing a long list of questions. Jack, by contrast, merely has to read the questions and reply in brief form. If his answers are inadequate, Irma may have the burden of moving for a court order to compel the answers. Jack may then resist Irma's motion on the ground of unnecessary hardship, impossibility, loss of memory, loss of records, and so forth. While it is possible that the costs of Jack might exceed the costs to Irma, in general the opposite is true.

The disparity in costs is an additional factor favoring Jack's investment in greater legal uncertainty. The net difference may be "invested" by Jack in other ways. He may invest in further conduct-modification activities. If the lawsuit has commenced, he may invest in added legal creativity to defeat the rule Irma is relying upon. The net difference may not be very large in dollar terms, but it does operate to favor Jack and hence to favor those who are striving to render the law more uncertain.

b. Prospect Theory

The mathematical theory of gambler's risk, recently elaborated into "prospect theory," [FN67] suggests that a person disadvantaged by the application of a legal rule has a greater incentive to avoid the rule than the person advantaged by it has to affirm its application. Whether at the planning stage, pre-trial, during litigation, or after trial, Jack has a net incentive compared to Irma that will translate into his spending more money than Irma with regard to the rule. As a result, over time, we can expect that any given initial probability of application of any rule will be downgraded by the greater investment in legal creativity to render that rule or its application more uncertain.

Prospect theory states that "the thousand dollars we stand to gain in a fair- coin toss does not mean so much to us in utility terms as the thousand dollars we stand to lose." [FN68] Let me suggest a simple rationale for the theory. Suppose Irma files a lawsuit against Jack for \$50,000, and that at the time of filing both Irma and Jack have a net financial worth of \$50,000. If Irma wins, she has doubled her net worth, whereas Jack has been wiped out.

The loss to Jack, however, is inevitably more devastating to him than the win to Irma is helpful to her. Irma, after all, might have doubled her money in some other way, such as by investing her money wisely or luckily. In a capitalist society, "money can make money." On the other hand, Jack, with no assets, has no money to invest. It might take him a great deal of time and labor to amass \$50,000 in savings. Hence he must view the potential loss of \$50,000 with a far greater degree of fear than the degree of pleasure with which Irma views the possible gain of \$50,000. Of course I have described a limiting case, but even as to marginal amounts, if Irma and Jack start with the same net worth, then any amount won by Irma has less utility to her than the same amount lost by Jack has disutility to him.

To be sure, litigants rarely start with the same net worth. But over millions of cases, net worth is roughly the same between plaintiffs and defendants. There are, of course, "institutional" defendants, such as insurance companies, which may seem to tilt the beginning net-worth balance in favor of defendants as a class. But such defendants view their losses in any given case as much more important than the dollar amount that is lost precisely because they are "institutional" defendants—that is, because they fear the adverse precedent in future similar claims against them. Furthermore, there appears to be no evidence that institutional defendants are a more numerous class than institutional plaintiffs.

There is thus a fundamental asymmetry between Irma and Jack. Theoretically, a legal system could cure the imbalance by awarding to successful claimants an additional amount out of the public coffers so as to equalize incentives. Yet any such scheme would not only encourage frivolous lawsuits, but would also be exceptionally difficult to sell legislatively to the public. Therefore, apart from any such scheme, we may expect that existing rules will apply in the aggregate with less and less certainty to persons potentially disadvantaged by them because they will have a greater incentive than advantaged persons to spend money in conduct modification and attorneys' fees to avoid the rules.

3. Summary

I have attempted to present a number of reasons why the law becomes more uncertain. First, I have criticized the theories of Dworkin, Posner, and Landes that the law tends toward certainty. Second, I have presented some factors that impel rules toward uncertainty at the 0.5 level: the maximization of informational output on the part of judges and scholars, and the relative ease by which litigating parties defend or attack rules. Finally, I have suggested other systemic factors that favor persons disadvantaged by the application of rules so that they are induced to spend more money than advantaged persons in legal creativity and behavioral ingenuity: asymmetries in cost effectiveness and prospect theory. All of these operate in the aggregate to make the law less certain.

The erosion of legal rules, however, is not straight-line. From time to time there are increases in the certainty of either existing rules or of new rules. The result in a given case, or a new statute or its interpretation, could make the law temporarily more certain. In the next and final Part, I shall examine some of the means by which people have attempted to increase the certainty of the law, and indicate some other means which in my opinion may mount at least a holding action against the forces of erosion. Ultimately, however, I believe that the financial and psychological factors given in the present Part will win over all countermeasures, and that the law will increasingly wax uncertain.

II: CAN UNCERTAINTY BE REDUCED?

In this Part I shall discuss various attempts, some historical and some current, to reduce uncertainty, and indicate why these have not been successful and do not promise to be successful in the future. Then I shall present some prescriptions of my own which may, at

least in the short run, reverse the trend toward uncertainty in the law.

A. Unsuccessful Attempts At Reducing Uncertainty

1. Historical

The first major revolution in the development of the common law was the establishment in medieval England of the Chancery Courts, or courts of equity. The "need" for the equity courts was, by historical consensus, to mitigate the harsh rigors of the common-law courts. The latter had developed increasingly strict and formal pleadings and causes of action, but real-world variety and the need for justice outstripped the narrowness of the common-law forms of action. In other words, persons potentially disadvantaged by the common law became increasingly successful in modifying their conduct so as to fall outside the conventional jurisdictions of the common-law courts.

The common-law forms of action, in short, applied less and less certainly to the activities of the real world. But because that legal system, like any legal system, had to offer a means for the peaceful resolution of conflicts if social anarchy was to be checked, it responded by inventing courts of a new and more flexible jurisdiction. The new equity courts were able to capture many of the disputes from which the common-law courts had effectively removed themselves.

The competition for judicial business engendered by the equity courts had the effect of loosening and expanding the common-law forms of action. Yet the equity courts themselves became victims of the same rigidity as early common-law courts. By Dickens' time, equity proceedings were so complicated that Bleak House, which mercilessly described cases in Chancery that were not terminated until attorneys' fees and court costs dissipated all the trust or estate assets, was a poignant satire to the observer of the English legal system.

Theoretically, the combination of common-law courts and equity courts should cover the array of possible private disputes. Nevertheless, by the nineteenth century in England, it was again clear that the product of both court systems still resulted in intolerable legal uncertainty. Perhaps the legal rules themselves had become permeable and exception-ridden as the result of impelling them toward the 0.5 level of complete uncertainty.

Jeremy Bentham railed against the unpredictability and uncertainty of the common law, [FN69] and advocated a positivist cure in the form of comprehensive statutory codification of rules. Although codification did not make notable headway in England itself, it took hold in several states in the United States where it was also felt that the common law (partly inherited from England) had become too uncertain. Many Latin American countries and civil-law countries in Europe adopted codification as a way to let the public know, finally, what the law said with reasonable certainty.

Codification, however, did not solve the problem of uncertainty. The codes themselves inevitably had rules using words such as "reasonable," "due," "ordinary," and the like, opening vast areas of uncertainty. [FN70] Moreover, as Lon Fuller suggested, it is difficult to develop a common-law interpretation of ambiguous words in a code, because the fact that it is a code tends to deprecate common-law interpretation. [FN71] In addition, the more complicated and specific a code is (glance at the New York Penal Code!), the more likely it is to contain internal inconsistencies.

The very complexity of a code also offers a barrier to judicial attempts to interpret its language in light of the purposes or intentions of the framers (witness the Internal Revenue Code). When Napoleon, author of one of the first civil codes, was informed that the first commentary on his code had been published, he is said to have exclaimed, "My code is lost." [FN72] In Professor Gilmore's words, "We know today that the Benthamite claims on behalf of a codified law were absurd. The law, codified, has proven to be quite as unstable, unpredictable and uncertain-quite as mulishly unruly-as the common law, uncodified, had ever been." [FN73] Ultimately, codes are nothing more than collections of rules. [FN74] Yet, as I shall try to show in the next Section, rules cannot solve the problem of legal uncertainty.

2. Positivism and the Reliance Upon Rules

The age of positivism, dating from Bentham and Austin in the early nineteenth century, has attempted to combat legal uncertainty by adding more and more statutes and regulations to the body of law while accepting a permissive attitude toward the jurisdiction of courts. Positivists view legislation as a continuous process of plugging the gaps between previous statutes, and courts as "discretionary" legislatures inventing new rules and applying them retroactively to parties. [FN75] Even so, real-world variety outstrips the ability of legislatures to catch up to the ingenuity of persons who, disadvantaged by the law on the books, modify and adjust their conduct to cast doubt upon any attempt on the part of potential claimants to bring them to legal account. [FN76] And as far as "judicial legislation" is concerned, the actual parties to any case are inevitably taken by surprise if a judge invents a new rule as the rule of decision [FN77]-which is the very definition of legal uncertainty. At the same time, the precedent established by such a decision merely adds one more rule to the pile.

Any rule of law suffers from the dilemma of compromising between generality and precise applicability. A very general rule ("behave in an orderly fashion") is so uncertain in its applicability as to be virtually useless, whereas a very specific rule (a traffic policeman ordering a given car to stop) would impossibly require an almost one-to-one official-to-citizen ratio and create vast problems of communication and coordination among the officials who mete out the commands. [FN78]

Nevertheless, positivists believe that rules of middling generality contain core instances whose applicability is totally certain. [FN79] I have previously argued that this position has been effectively refuted by Fuller. [FN80] Any new rule only appears to be certain in

its application to core instances until a case arises that upsets it. For instance, the earliest formulations of the rule against murder were couched simply in terms of prohibiting the killing of one human by another. It was soon evident that there had to be a qualification of "willfulness." But then there arose the first case of self-defense, clearly a willful killing of another human. Accordingly, a self-defense exception had to be added to the statute. But what, then, of capital punishment for the murderer? How could the official of the state proceed to execute the murderer, since the execution itself was willful and not in self-defense? The usual definition of homicide addresses this problem by restricting the crime to "unlawful" killings. [FN81] But this is clearly overbroad; the term "unlawful" begs the entire question. Problems of whether killers have any free choice and thus can ever act willfully cause great uncertainty in the present law. If defendants are wealthy enough, they appear able to bring in sufficient psychiatric testimony to show that they must not have been able to control their impulses at the moment of the crime.

It would be analytically clearer to view any rule as merely a presumption. [FN82] Thus, if a defendant is shown to have killed another person, the evidentiary burden switches to the defendant to interpose an exculpatory reason. If a homicide statute contained no self-defense exception, for example, it would be better to view the statute as a presumption that allows a self-defense explanation than to attempt to argue that self-defense somehow was contained in the original statutory wording as an exception. [FN83]

And what is analytically clearer is also better as legislative technique. The attempt to write in exceptions to statutory rules not only bogs down statutes in clause after clause of jargon, but more importantly each exception creates "boundary" problems of its own. Not only do we have to find, using positivist theory, a "core" and a "penumbra" for the main rule, but we must also find a core and penumbra for each statutory exception and dividing lines between core and penumbra in each instance.

A glance at the volumes of rules contained in the Code of Federal Regulations should convince the most ardent positivist of the self-defeating nature of runaway rulemaking. Only the most spurious kind of certainty is produced—the feeling that, with all the verbiage, the "law" must have an answer to every question. In fact, the verbiage creates intractable problems of organization and indexing, with many areas overlapping others. No one can be certain when finding a rule that there does not exist some other rule, perhaps poorly indexed, that directly contradicts it.

3. Jurisprudential Approaches

Legal scholars sometimes invent comprehensive theories about law that may help explain many cases which otherwise appear irreconcilable. I do not accept the cynical view of some critics of jurisprudence that general theories do not help in any way to throw light upon the resolution of specific disputes. [FN84] Rather, as I suggested earlier, scholarly theories on the whole increase legal uncertainty because of their effectiveness in offering appealing new rationales for overturning or questioning precedents. [FN85] Nevertheless,

it is always possible that any given theory might go a long way toward "solving" the problem of legal uncertainty by exposing the crevices of a complex legal tangle.

a. Hohfeld, Calabresi, and Contract Theorists

An early taxonomy was suggested by Hohfeld that seemingly offered an alternative to rules: law was to be reduced to personal rights, duties, privileges, immunities, and so forth. [FN86] Yet it has proven extremely difficult to express rights or immunities in terms other than rules. [FN87] Professor Calabresi has attempted some clarification of types of rules, suggesting a broad division into property, liability, and inalienability rules. [FN88] This appears to be a genuine advance toward the goal of increasing legal certainty. As it stands, however, it is too broad and abstract to reduce significantly the uncertainty in any given case or controversy. Calabresi's broad categories recapitulate most of the law's ambiguity within each category. Nevertheless, one can never be certain that future divisions along the same lines might not someday increase legal certainty significantly.

The field of contracts would appear to be highly amenable to clarification, and hence increasing certainty, because of the discrete, verbal nature of contracts themselves. Williston's theories of contracts take such an "objective" view of agreements. [FN89] But the problem with all such approaches is that a contractual document is not itself the matter that requires legal resolution. Rather, a contract is an expression of an underlying set of purposes between the parties. It is this set of purposes which requires clarification.

If a contract were like a game of chess, "objective" rules could be specified that might, in time, resolve all disputes having to do with the game. Instead, as Corbin early recognized, a party to a contract may fail to get into the instrument itself an exact description of the bargain and an exact presentation of all imaginable future contingencies. [FN90] Thus Professor Macneil has suggested that a contract cannot be a "discrete" instrument subject to exhaustive logical analysis that settles for all time the rights of the parties. Rather, it is one manifestation of a relationship between the parties that was in existence prior to the written instrument, and in many cases extends forward into time after the instrument is signed. [FN91] This "relational" view of contracts, much like the international law of treaty interpretation, [FN92] inevitably means that the other facts of the parties' historical interaction are more important than the rules of contract interpretation. Clearly there will be considerable uncertainty in predicting contractual rights under the relational view.

While Macneil's theory would thus seem to be an example of a jurisprudential approach that increases legal uncertainty, I contend that the old Willistonian objective-discrete view created only a spurious certainty that was gained by papering over both real interparty controversies over contractual rights and real divergences of actual practices from the four corners of the paper instrument. Private parties are not much better at fashioning rules to govern themselves than legislators are at enacting rules for public governance. Both fail to capture the inventiveness of real-world variety and the ingenuity of disadvantaged parties in modifying their conduct to avoid the implications of adverse prescriptions.

b. Economic Analysis of Law

No recent theory of legal decisionmaking has purported more to clarify the law and make it more predictable than the economic analysis of law approach. Because of its prominence, I offer a few specific remarks.

Members of the economic analysis school do not maintain that their theory is vindicated by all past judicial decisions. Clearly, some cases were wrongly decided in light of the theory. Thus, as a purely descriptive theory, economic analysis can only account for some, perhaps a majority, of the previous cases. But what, then, of the cases that were wrongly decided in light of the theory? There are two possibilities: either those cases in fact should have been decided differently, or those cases were rightly decided and the economic analysis theory is itself wrong. This latter possibility is the subject of debate among critics and defenders of economic analysis. [FN93]

But let us consider the first alternative, that the cases unaccounted for by economic analysis were wrongly decided. In order to reach this conclusion, the economic analysis theory has to be changed from a descriptive theory to a normative one. For example, suppose an old precedent was "wrongly" decided according to economic analysis. Adherents of the economic school would then say that in a new case where the old precedent would otherwise control, the judge should refuse to abide by the old precedent, and instead should decide the new case the way that economic analysis seems to require. In order for the economic analysis model to be thus extended, a judge must be convinced that there is some normative force underlying the economic theory.

What, then, are the normative values, if any, behind the economic analysis of law school? In its early days, Professor Posner suggested that the normative force was the avoidance of waste. [FN94] (In brief, the law should maximize "efficiency" and minimize "transaction costs.") [FN95] But an immediate problem arises: what is waste? What is waste to one person (e.g., attorneys' fees, brokerage costs) might be a livelihood to another (attorneys, brokers). Moreover, that livelihood is not necessarily less important than the manufacturing process. A manufacturer might be able to sell automobiles more cheaply if legal transaction costs were reduced, but that would probably mean that there would be more aggregate driving around in a society and contrastingly less of the intellectual life of lawyers. Why is producing cars not wasteful while analyzing cases and statutes is wasteful? Perhaps because they have such problems facing them, the economic analysts have recently shifted to a different normative justification for their approach: the maximization of wealth.

It is still early to tell what the fate of wealth maximization will be, [FN96] but there are many other values that might equally compete for our attention. Harold Lasswell listed, in addition to wealth: security, respect, enlightenment, well-being, affection, and rectitude. [FN97] When one or more of these conflict with wealth, which wins? Murdering someone who "stands in the way of progress" (e.g., a government official, a patent holder

who refuses to license his invention at any price) might maximize wealth. Or, affection, enlightenment, and rectitude might eclipse wealth maximization as a value in given instances. [FN98] Maximizing wealth might be a desirable goal for a corporation whose shareholders do not want management to use assets for anything other than producing profits (e.g., no contributions to charity or the arts), but should it be an overriding goal for society itself? Moreover, fundamental problems arise in defining what "wealth" is. [FN99] Hence we cannot conclude that wealth maximization is a normative imperative that requires judges to conform their decisions always to the dictates of economic analysis.

This lack of a compelling normative justification, in turn, renders uncertain our ability to predict that judges will follow the economic analysis theory in deciding cases. Hence, the theory may or may not increase legal certainty. To be sure, proponents might claim that increasing legal certainty is the value of economic analysis, which should be adopted for that reason. But that argument will be insufficient if my previous contention is true that judges tend to want to increase the information value of their services. [FN100] Nor will the argument be appealing to those who believe that values other than wealth maximization, such as the values given by Lasswell, are more important in specific cases than the value of legal certainty.

B. Strategies for Reducing Legal Uncertainty

Because of the forces that I have described favoring the continuous increase of legal uncertainty, I doubt that it is possible in the long run to reverse the trend. However, it is useful to think about some strategies which may slow down or even reverse the trend in the short run, at the least because these may offer heuristic suggestions for future work. The first two that I shall suggest—delegalization and non-rule decisionmaking—are alternatives to the regime of rules in the law. The third—bringing rules into congruence with natural law—attempts to work within the regime of rules.

1. Delegalization

The existence of a legal rule, as we saw in Part I, invites persons disadvantaged by the rule to attack its content, and further encourages disadvantaged persons to modify their conduct so that the rule less certainly applies to them. One obvious way to reduce uncertainty in the law, therefore, is to repeal as many of the rules as possible. Delegalization removes the uncertainty that can be generated by statutory rules or regulations by making it certain that those statutes no longer have the force of law and hence need not be taken into account by persons planning their activities.

Delegalization cannot apply to much of criminal law, however, since we want persons to take those rules into account in planning their conduct. [FN101] Even so, the area of "victimless crimes" could be delegalized, both because of the vast uncertainty generated by the attempted application of those rules and the clogging of police and judicial machinery in that increasingly futile attempt.

But many civil laws and codes could be repealed. Some business law, for example, is an attempt by a legislature or bureaucracy to avoid one party's taking unfair advantage of another by misleading or fraudulent representations. Yet the common law could deal with such questions. [FN102] Legislation and codification often allow misrepresentation to be accomplished by clever tailoring of conduct and claims to the apparent dictates of the statute.

Other possibilities for reducing the plethora of law on the books have been widely suggested. A flat-rate tax, for instance, on persons could eliminate the need for most of the Internal Revenue Code, including its estate, gift tax, and trust, corporate, and partnership tax provisions. [FN103] Deregulation and debureaucratization, which are presently being pursued with some hope of success, would also wipe out multitudinous Kafkaesque regulations spawned by administrators and bureaucrats.

Clearing statutory debris off the books would not mean depriving the public of causes of action. Where there has been misrepresentation or unfair advantage, common-law courts would be available to redress the grievance. Most statutory rules are ultimately impediments to the redress of grievances, because of the opportunity they afford to persons either to hide behind the words of statutes that give them an unfair advantage by inviting literal compliance or to avoid the application of disadvantageous statutes by slight modifications in conduct or representations. Perhaps we shall never see wholesale delegalization in our lifetimes, but at least we should be alert to the dangers involved when politicians promise to enact new legislation to make sure that the latest front-page scandal does not recur. Throwing more words at a problem usually makes it worse.

The courts may be able to play a role in delegalization. Professor Calabresi has recently argued that courts should amend or revise outmoded statutes in the same way that they overrule outmoded precedents. [FN104] Such "judicial sunseting" of statutes should occur, according to Calabresi, when in the court's view the statutes no longer "fit the legal landscape." [FN105] Calabresi has convincingly shown that old statutes have no higher claim to persist than old precedents, as both may be traps for the unwary public. Additionally, clearing away statutes should increase legal certainty.

A difficulty with Calabresi's suggestion is that it would make numerous old statutes more uncertain. Lawyers and laypersons would have to predict whether a court might decide that a statute no longer fits the legal landscape. Yet the topographical features of the landscape may not be at all obvious. Nevertheless, if Calabresi's suggestion were adopted and if courts "sunsetted" much legislation, the net effect might be to increase legal certainty.

2. Non-Rule Decisionmaking

The genius of the common law is not that it provides us with cases from which we can extract legal rules, but rather that it is a mechanism for deciding cases on the basis of their similarity to prior adjudicated situations. A case is "on all fours" with a precedent when its

relevant facts are analogous to the facts in the prior case. The common law could have developed without opinions being rendered by judges; a statement of facts of the case and the announcement of a decision for plaintiff or defendant would have sufficed. Judges early realized, however, that a statement of reasons for a decision—rules indicating why the present facts are analogous to a given prior case—would help future judges and litigants understand the result.

Nevertheless, the reasons given by judges in their opinions are only commentaries on the law, and are not the law itself. A future judge or scholar may see that the true reason for a prior decision was not something that the judge in that case was able to perceive. Sometimes the discernment of a deeper rule of decision in a line of cases has a profound impact upon future decisions. When that happens, we do not say that the law has changed, as the prior cases remain the same. The only change is that we see a better rationale for that line of decisions. Another indication that we do not confuse reasons given in opinions with the law itself is that we distinguish between reasons necessary to the holding and reasons we label as dicta. This distinction would not be necessary if it were not for the primacy of the facts in establishing the precedential value of any case, for what is dictum in one case could just as easily have been the necessary reasoning given a different set of facts.

Could a mechanism be described that would avoid rules altogether in the decision of cases? If we assume for the moment the existence of such a mechanism, then a large source of legal uncertainty would be eliminated. At trial, a disadvantaged person could not argue the undesirability of a rule of decision on the ground that it is too general, or too specific, or does not cover the facts of his case adequately, or will lead to intractable problems if tested against a series of hypothetical cases. Moreover, persons planning their activities would not have at hand convenient rules which they could render increasingly uncertain by modifying their planned conduct. On the other hand, it might seem that without rules people might not know the content of the law. Would not the law then be completely uncertain?

I have attempted to describe in an earlier article a computerized non-rule decisionmaking procedure that makes use of multidimensional multiple regression analysis of the facts of all the cases in a given jurisdiction. [FN106] People could easily determine the content of the law by typing into their computer consoles their factual situation or their planned conduct. The computer would ask some questions to elucidate further relevant facts, and then render a judgment on the law based on the nearest "fit" of those facts to the weighted prior adjudicated facts (precedents) in the jurisdiction. Because attorneys for the other side could reach the same result by plugging in the same facts, there would be no need for judges. Courts would be reduced to the function of fact-determination; if facts were disputed, juries would determine the facts. But there would be no need for a human decision on the law, for the facts once given or established would yield a unique and replicable decisional result.

A major drawback to my proposal is that, if used generally, it would freeze the

development of the common law. All decisions from the time the computer program is in place would simply follow from the databank of precedents, but could never add to those precedents. For this reason among others, [FN107] I have proposed that any test of the system be confined to questions of jurisdiction or choice of law, for they are matters that precede adjudication on the merits and notoriously expend judicial resources and litigants' funds. [FN108]

3. Making Rules Congruent with Natural Law

Despite the preceding arguments, it is a safe bet that there will always be rules. To confine ordinary conversation-much less the law-to particularistic factual statements is a near impossibility. [FN109] Rules supply a variable level of generality enabling the mind to organize facts and remember them better. Rules enable legislatures to cast a wide net in affecting the activities of numerous people.

When persons disadvantaged by a legal rule attack it, they do so on the grounds that its application to them or to future persons would be unfair, unjust or unconstitutional. In order to mount such an attack, they must have some standard in mind against which they have measured the legal rule and found it wanting. Putting constitutional questions aside for the moment, if the standard is couched in terms of justice or fairness, we might call it "natural law." Professor Finnis in an important recent book, described many rules of natural law as those rules comporting with our sense of "practical reasonableness." [FN110] There should be nothing particularly mysterious about the term "natural law"; here I take it simply to mean that rule of decision in a given case that would accord best with practical reasonableness in the absence of any relevant legal rules.

There will always be a gap between some actual rules in the legal system and the rules of natural law, a gap that can be exploited by persons disadvantaged by the application of the actual rules to their conduct. Let me briefly give a theoretical account of how this gap arises. When common-law rules were first formulated, they may have been very close to natural-law rules. But divergences from the dictates of practical reasonableness were inevitable from time to time, due to the differences in the persuasive ability of lawyers arguing cases and the fact that judges were not always reasonable, fair, or disinterested. If judicial precedents had been corrected whenever they were seen as diverging from the just or fair result, errant rules might over time have gravitated toward the natural-law optimum. However, the correction is very difficult given the common law system, or indeed, given any legal system. For the "fairness" of the natural law rule is now countered by the "fairness" of reliance by persons on the announced legal rule, even if that rule diverges from the natural-law optimum. [FN111]

If a person advantaged by a legal rule relies upon it, or even "takes advantage" of it by complying with it literally to achieve an unjust result that was probably not contemplated by the framers of the rule, the legal system must give weight to that reliance in the interests of stability and continuity. The person disadvantaged by the rule can argue that the rule is unjust or unfair, but the legal system is hard put to revise rules too readily in the

interests of fairness and justice because of the reliance interest that I have described. In short we have stare decisis-the element of continuity and stability in the law that perpetuates legal rules whether or not they diverge from the set of optimally fair or just rules.

The gap between a legal rule and its natural-law counterpart is aggravated by the addition of statutory law. In the early days of legislation in England, courts would strictly construe new statutes in order to shape them in light of the purported wisdom and justice of the common law. Today the opposite situation prevails: courts give great deference to the legislature. Yet many statutes, particularly if construed literally, can result in unfairness and unjust harm to persons disadvantaged by their application. In American law, courts have recently seemed to become more active in overturning statutes on the ground that they contravene vague provisions in the state or federal Constitution-sometimes that the statutes offend "substantive due process." [FN112] This development is especially interesting for present purposes, as it indicates a willingness to revise statutes on the basis of their fairness-what might be called the natural law component of substantive due process. [FN113] Professor Calabresi, in any event, is surely right in saying that there is no good reason why courts should treat an old statute with more respect than an old precedent. [FN114]

Courts may construe an old precedent narrowly in order to avoid reaching an unfair result. They may confine an unjust prior case to its facts. They may construe statutes narrowly, or even overturn them, if the statutes are held up to broad fairness-type emanations from the constitution. But all these methods aggravate legal uncertainty. For the result tends to come as a surprise to the claimant relying upon the statute or precedent. The very term "construe narrowly" indicates that a counter-predictive result is forthcoming, for the normal expectation is that the court would simply construe the statute or precedent and not construe it "narrowly."

The problem, in sum, is that the gap between a legal rule and its natural-law counterpart affords an opportunity to disadvantaged persons to convince a court to change the law, and that if the court does so, the person advantaged by the law has been rudely surprised for relying upon it. This is a dilemma inherent in the common law, suggesting that we might try to close the gap by means outside the common law.

a. Invent a New Legislative Entity

One possible means for narrowing the gap between rules of law and rules of natural law would be to create a new entity, which we might call the Case Revision Commission, that would fill a niche between the court and the legislature. At the outset I caution that this is a most impractical suggestion; vested interests being what they are, the suggestion is ivory-towerish in the extreme. I present it for heuristic reasons primarily if not solely.

Legislatures look forward; courts look backward. Yet the impact of judicial dispute-resolution looks forward; future potential litigants are affected by a case that they

did not participate in. Over the course of time, if enough unfair judicial precedents pile up, a legislature might pass a statute changing the rule of decision prospectively. But in matters involving private disputes, legislatures are very slow to act. A contributory negligence rule might persist in the courts for decades, though judges and legislators alike agree emphatically that it is unfair and should be replaced by a comparative negligence rule.

Yet it is questionable whether courts should make the change themselves. For if a court makes a change, it would do so in one of two ways. First, it could make the change at the retroactive expense of one of the parties to a case. That would be unfair to the party, however, because it would upset the party's reliance interest in the law as it stands. Second, the court could decide the case before it on a given theory (for example, contributory negligence), but then announce prospectively that the rule henceforth will be different (here, comparative negligence). This procedure, however, is subject to two major objections. It creates uncertainty in the next case, for the party disadvantaged by the change will argue that the court's previous announcement of a prospective change was dictum and quite unnecessary to the result it in fact reached, and hence in the instant case the court should apply only the holding of the previous case (which held that contributory negligence applied). Additionally, the technique of prospective change tends to undermine the pressure that litigants can put upon judges to decide the case at hand in the fairest way. For if a judge is uneasy about the fairness of a given rule, it would be the "easy way out" for the judge to apply the rule one last time and then change the rule prospectively. The ease by which this could be done would take away from the party disadvantaged by the rule the argument that the rule should be modified immediately. Such a procedure would therefore blunt the adversary system and its ability to reach the proper result in any given case.

Consider instead a Case Revision Commission, appointed by the governor of a state with the consent of the legislature, consisting perhaps of one or two laypersons, retired judges, ethicists (either teachers of moral philosophy or religious leaders), or other qualified people. The legislature would delegate to this commission a limited legislative power that would be subject to item veto by the legislature in the following session. The power would be the right to revise unfair judicial decisions prospectively. For example, the most recent decision upholding contributory negligence could be changed by the Commission to a new rule of comparative negligence for all future litigants, or for all future litigants after a six-month period. The Commission would thus revise legal rules to approach more closely perceived natural law rules by simply "reversing" judicial decisions prospectively.

Would the existence of such a Case Revision Commission have a debilitating effect upon common-law adjudication similar to the one that I have above described concerning prospective overruling by courts? A judge might believe that the Commission will revise a bad law, and thus may continue the bad precedent without the deep searching that otherwise would be required to see whether the bad precedent is really securely grounded. However, I think that a countervailing psychology will negate any such tendency: judges simply dislike being reversed, and may especially dislike being reversed by a legislative

body. The Case Revision Commission I have described would be a different and independent body, one the courts would mistrust to some extent. That mistrust or suspicion should operate to keep judicial adjudication on its present course. However, my guess is only a guess; no answer is possible unless the concept is tested. And since I doubt that there will ever be a test, I offer the concept to stimulate the imagination.

b. Revise the Teaching of Law

A second possible approach external to the adjudication system to reduce the gap between legal rules and natural-law rules would be to change popular attitudes toward the content of the law. If we could lower the expectation that people can rely on the literal wording of statutes or cases, and educate the public that fairness, practical reason, and justice considerations have considerable weight in determining the actual content of law, then the gap could be made narrower and legal certainty could be increased. (The opposite strategy for increasing certainty, which I would label the "Nazi" strategy, would be to educate the public that legal rules, no matter how arbitrary, will be enforced literally, and that justice and morality do not exist except to the extent that the state explicitly recognizes them.)

The massive task of educating the public would need to begin in the law schools, because much of what the public believes law is stems from what attorneys say it is. However, law school education today seems to be heading in precisely the wrong direction. Instead of examining issues of rightness and fairness, exploring moral philosophy and its relation to conflict resolution, and examining the facts of reported cases in detail to sort out the question of which side deserved to win, legal study is increasingly becoming a matter of learning an enormous body of rules. When some professors, trying to swim against the entropic tide of legal disintegration, spend an entire class examining one or two cases with a view toward formulating the rule of decision and criticizing it, students comment impatiently that the professor took a great deal of time to get to a simple point. And when a fraction of those professors end the class without stating the rule-leaving it to the students to figure it out for themselves-students make themselves heard in the dining hall and student newspaper that those professors seem ignorant of the law.

The students can hardly be criticized, for their very casebooks are becoming more rule-oriented. Compilers of casebooks are increasingly filling pages with notes and comments, explaining for the lazy student what the principal case stands for. And in order to make room for these editorial notes, the cases are whittled down. Issues in the case that are not relevant to the particular point the compiler is making in that chapter are simply excised. Worse, facts in cases are summarized or often omitted entirely. The true source of the law-the real events in the lives of real people-are shunted aside in the mad rush to give the students more rules, more disembodied arguments, more slabs of opinionated, pedestrian prose. And there is so much of the latter that casebooks are getting bigger, with consequent pressure on students to read more pages and to think less about them.

The illusion of legal certainty in law study is fostered by "black-letter" rote learning, the idea that students must learn laws and not the law. Canned outlines, hornbooks, nutshells, highlights, and other mentally stultifying paraphernalia prepared by professors and assiduously marketed to students by commercial publishing houses have created a crisis of logorrhea in even the best law schools. Perhaps the trouble all started over fifty years ago when the first "restatement of the law" introduced the black-letter law concept. These compendia that simplify by distortion the logic and value orientation of the common law have proliferated. Students exposed to them in law school who go on to become judges incorporate into their judgments the prescriptions in the restatements as if they were handed down from Mount Sinai, and the cycle accelerates and feeds upon itself.

Students are increasingly getting the message that the law consists entirely of words that can be manipulated. Somehow the meanings of the words, and more importantly the real-life facts of the case and the real-life crises of the parties, fade into background insignificance. Students become adept at manipulating words; but they are losing a critical attitude toward those words, a sense of comparing those words to underlying but real questions of fairness and equity. There is a Coase-theorem apathy that it does not matter which side wins a case-so long as the attorney's high transaction costs are paid. Law school becomes training in how to generate attorney's fees.

But underlying equities will not go away. The natural-law rules cannot be snuffed out; they persist to create a tension between the law *55 on the books and the law that ought to be. By emphasizing the former, law schools contribute to the increasing uncertainty of the law. They teach a law that has lost its moorings, that drifts on a sea of verbiage.

To reverse the trend, law schools must return to basics. We must give up the attempt to cover the vast subject matter of law, and rely instead on samples that allow for deeper examination of underlying values. We must realize ultimately that words are infinitely malleable, but real-life situations behind them are immutable history. The peaceful resolution of conflicts requires resort to underlying values to the extent that they are shared (and there is greater commonality than legal skeptics profess). [FN115] Those values will always furnish a standard of criticism for rules on the books.

Only if values are seen as part of the method for interpreting the law on the books-which is, of course, the natural-law philosophy-can expectations of literalness in law-determination be reduced. With that reduction would come a concomitant increase in legal certainty. Yet the forces of conservatism in legal education and the increasingly frantic sense of student consumerism seem too pronounced to make any such changes likely in the near future. [FN116]

CONCLUSION

It would be nice to furnish a happy ending to this Article. But the strategies I outlined in Part II, even in the unlikely event they were adopted, would only address part of the problem of legal disintegration. Persons disadvantaged by any rule, even if the rule is fully

congruent with natural law, would still have a net economic incentive over their counterparts to make their conduct appear more morally sympathetic. My proposals at best might constitute a holding action against the entropic forces of legal uncertainty, and at least would raise the costs to disadvantaged persons, making it harder for them to render the law more uncertain. But given the analysis of Part I that an economic bias exists in the legal system in favor of persons disadvantaged by legal rules, coupled with a psychological incentive for judges and scholars to upset expectations, the unhappy conclusion appears to be that the increase in legal uncertainty is inexorable.

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[FN1]. Law, according to Holmes, consists of "prophecies of what the courts will do in fact." Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 461 (1897). Almost all of what we think of and respond to as "law" comes in the way of predictions of what court or other official body would do if presented with some dispute. An individual's conduct is shaped or affected by a rule exactly according to her (or her lawyer's) perception of the chances that she will be officially sanctioned on the ground that she violated the rule. I talk of "official" sanctions because I am discussing here only actions with legal consequences. See generally D'Amato, *The Limits of Legal Realism*, 87 YALE L.J. 468, 481-82 (1978). One theoretical objection to viewing law as a prediction of a judge's behavior has been the idea that such a view would offer no standard for the judge himself. Thus, such a definition of law may be considered to be question-begging. This theoretical objection is arguably invalid because it is possible to see the judge's role as a post hoc fulfillment of the best lawyer's prediction of what a judge would decide. See *id.* at 495-98.

This "realist" definition, see *id.* at 468-72, may seem to be too narrow. Law, in a broad sense, is a body of standards or norms that affects human behavior. But even taking this broad definition, any person within the society will want to know why and in what way he should conform his conduct to the law. He would be well advised to act in such a way as to enlist officials of the state in his support, or at least to avoid adverse actions by those officials. He should be concerned about officials because they can invoke the state's overwhelming power to enforce their decisions. But in order to predict what officials will or will not do to him, he must have recourse to rules, principles, norms, or other guidelines that may indicate in what circumstances officials will act in particular ways. A lawyer consulting diverse "sources" of the law has some right to claim, on the basis of professional training and experience, an ability to make such predictions.

[FN2]. Throughout this Article I shall refer to "Irma" as the person or entity who would be advantaged by the application of a given rule to Jack's activities, and to "Jack" as the person or entity disadvantaged by the application of the rule. This does not necessarily

mean that Irma is plaintiff and Jack defendant. For example, if the rule comes up in the context of a counterclaim, I would still refer to the counterclaimant as "Irma."

I do not use the term "advantaged by a rule" to refer to a rule used in defense against another rule. For example, if the state ("Irma") prosecutes Jack for murder, and Jack defends on the ground of self-defense, I do not refer to the "rule" of self-defense. Instead, Irma is relying on the "rule" of murder, whereas Jack is trying to demonstrate an exception to that rule.

[FN3]. This does not mean that on the same facts Irma could not sue on a different legal theory. As we shall see later, the extinction of the "palimony" cause of action does not mean that the law as a whole has become more certain. Irma may still feel she has been harmed, and may attempt to come up with some other legal theory (perhaps with a very low a priori chance of prevailing) that would achieve her desired result against Jack. See *infra* note 59 and accompanying text.

[FN4]. A related but operationally different definition of legal uncertainty has recently been used by a number of writers concerned with a specialized problem in jurisprudence. They mean by "uncertainty" the situation that obtains in a legal system when that system contains at least one case that in principle cannot be decided in an identifiably and uniquely correct way ("ties"). See, e.g., Farago, *Intractable Cases: The Role of Uncertainty in the Concept of Law*, 55 N.Y.U. L. REV. 195 (1980). Cf. R. SARTORIUS, *INDIVIDUAL CONDUCT AND SOCIAL NORMS* 199-204 (1975) (where there is more than one optimal solution to a legal problem, judge has absolute discretion to pick the optimal solution he likes best, implying parties can have no expectations in such situations; author then argues there are no such situations); Raz, *Legal Principles and the Limits of Law*, 81 YALE L.J. 823, 843-46 (1972) (judicial discretion operates where the law does not provide a uniquely correct solution).

I have previously criticized this "seamless-web" view on the ground that legal systems give rise to rebuttable presumptions. A claimant wanting to take advantage of judicial redress must establish her case past the 50-50 persuasion level in the judgment of the adjudicator. If she fails to reach that level she loses; if she reaches just 50 percent she also loses; if she passes that point, even infinitesimally, she wins unless the respondent successfully rebuts the argument. See D'Amato, *Judicial Legislation*, 1 CARDOZO L. REV. 63, 72-85 (1979).

But apart from this jurisprudential debate, the ordinary person is presumably uninterested in whether the possibility of a "tie" exists in the legal system. She simply wants to know what the odds are of her winning; and if an accurate answer is 0.5, then she is informed that her case is a toss-up. From her point of view, an 0.5 answer is better than an 0.3 answer. From our point of view, however, the 0.5 answer maximizes legal uncertainty because it means that attorneys cannot predict which side has a better legal case.

[FN5]. As I will make clear later, my thesis is not that all rules will tend toward the 0.5 level of predictability. The same biases which exist in favor of defendant Jack's defeating claimant Irma's reliance on a given rule may operate to push the rule lower than the 0.5 level so that it in fact now begins to favor Jack instead of Irma who invoked the rule in the

first place. But as the rule is pushed closer and closer to 0, Irma will begin relying on other rules which are weaker than the rule with which she began (if they were stronger, then she would have relied on them first). The body of law consisting of all rules, therefore, will tend toward complete 0.5 uncertainty even though some rules will be pushed toward total extinction at the 0.0 level. See *infra* text accompanying note 59.

[FN6]. To attempt to be precise concerning the meaning of "rule" may lead to greater errors of imprecision than to treat the term loosely. In particular, many writers distinguish between rules and standards, or rules and principles. But these terms are not at all clear-cut. A rule that applies only obliquely to Jack's conduct may operate in the same fashion as does a "principle" that applies more directly; in both cases the judge may feel "free" to decide against the rule or standard.

[FN7]. "There is less possibility of accurate prediction of what courts will do than the traditional rules would lead us to suppose (and what possibility there is must be found in good measure outside these same traditional rules.)" K. LLEWELLYN, *JURISPRUDENCE* 60-61 (1962).

[FN8]. Although Irma will select the most applicable "rule" to cite in her favor, this does not mean that Jack can select a different rule to make his probability different from Irma's. First, the model I have set forth here applies to a lawsuit with one count, or applies separately to each count of a multiple-count lawsuit. Second, this model assumes that the fact that Jack may have rules of his own to cite to the court would be one of the factors pushing down the probability of application of Irma's rule. In other words, if Irma has rules which are 0.7, 0.6, and 0.2 in her favor, she will select the one that is 0.7. The same rules, of course, would be 0.3, 0.4, and 0.8 in Jack's favor—that is, in favor of Jack's defeating Irma's claim. The determination that Irma's preferred rule is only 0.7 in her favor includes the fact that other rules exist which might make it less likely that Irma's preferred rule will win for her; were it not for those other rules, Irma's rule might apply, for instance, at the 0.9 level in her favor. See also *supra* note 2.

[FN9]. The notion of what "counts" in a legal system in support of an argument can be taken in the positivist sense of a predetermined "legal" argument (a rule traceable to a legal source). See R. DWORKIN, *TAKING RIGHTS SERIOUSLY* 39-45, 106-23 (1977); D'Amato, *What "Counts" as Law?* in *LAWMAKING IN THE GLOBAL COMMUNITY* 83-107 (N. Onuf ed. 1982). The positivist theory runs into difficulties, for any rule or theory that preexists in legal materials must first have been "born"; and yet when it first arose, it could not by definition have been found in any prior legal materials. For an analysis of how positivist theories fail to account for the first use of a legal rule or argument, and for a suggestion as to how the problem can be resolved in at least one legal sphere, see A. D'AMATO, *THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW* 8-9, 47-72, 74-87 (1971). In the present Article, I am not restricting the use of what "counts" legally to prior legal materials, but rather am using the far more extensive criterion of what has a good chance of convincing a judge to decide in favor of the person making the argument. Such a broad view of "law" is defended in Fuller, *Human*

Interaction and the Law, in THE PRINCIPLES OF SOCIAL ORDER 211-46 (K. Winston ed. 1981).

[FN10]. See, e.g., *People v. One Mechanical Device*, 11 Ill. 2d 151, 142 N.E.2d 98 (1957) (anti-gambling statute held not to apply to pinball machines); *People v. One Device Known as a "Joker" or "Slotless" Slot Machine*, 346 Ill. App. 2d 562, 105 N.E.2d 769 (1952) (earlier anti-gambling statute applied to similar machine).

[FN11]. See 2 M. WEBER, *ECONOMY AND SOCIETY* 883 (G. Roth & R. Wittich eds. 1968); Trubeck, *Max Weber on Law and the Rise of Capitalism*, 1972 WIS. L. REV. 720, 740-43.

It might be objected that uncertain laws can be quite deliberate attempts by society to control conduct fractionally. Suppose, for example, that a lawyer's best prediction of the outcome of some potential dispute concerning his client's planned course of action is 0.6 in favor of his client. The rational, risk-neutral client will regard this the same as he would a prediction that the course of action will probably cost him 40% of what the other side might sue for. Perhaps all economically rational clients "discount" the legal liability of alternative courses of action through some such mechanism of prediction, and in turn are partially deterred thereby. Cf. R. POSNER, *ECONOMIC ANALYSIS OF LAW* 432 (2d ed. 1977) (promisor, in viewing the doctrine of impossibility, which shifts risk entirely to promisee, has to consider possibility that legal error may in fact "stick him with the loss"). Society may be seen as wanting this sort of result. For example, laws against murder may apply only rarely, if ever, to auto manufacturers because they might otherwise have to make crash-proof cars and charge unaffordable prices. Yet this analysis probably reads too much rationality into a system where no such fine-tuning was intended. And we might for honesty's sake require that if law is to apply only in fractions, it explicitly be made to do so. But cf. Coons, *Compromise as Precise Justice*, 68 CALIF. L. REV. 250 (1980) (justice served by system of precise apportionment, rather than by automatic winner-take-all dispute resolution).

There would be problems with law intentionally applied only by parts. Judges and legislators would be misled by an explicit commitment to view laws as compromises. Moreover, an infinite regress would be set into motion: the more a law is viewed fractionally, the more that judges, juries, and legislators will artificially "bolster" it (by adding to the sanction) so that it will "weigh" more. Something of this phenomenon may be seen in recent calls for "toughening" criminal legislation so that plea-bargains and paroles will be based on a longer average imprisonment.

[FN12]. Of course if a rule of law yields a prediction of 0.7 that it will determine a decision, a judge could still hold in favor of the opposite party- after all, there is an 0.3 chance that the judge would have done precisely that. Just as a meteorologist who predicts that tomorrow there will be an 80% chance of sunshine is not contradicted if it rains tomorrow, so too any rule of law is only accurately specifiable in probabilistic terms. But if it rains on many occasions when the meteorologist had high predictions of sunshine, we can properly criticize him or replace him.

Similarly, a judge who continually holds against the lawyers' estimates of applicability of

rules may properly be criticized by the practicing bar (and will probably be subject to numerous reversals on appeal). But the crucial point to remember is that if the prediction of the applicability of a rule is 0.5, then a series of totally randomized decisions by judges confronted with those rules cannot be criticized. (At any level of prediction other than 0.5, a series of random decisions can at some point be criticized-sooner if the prediction is closer to 0 or 1.) The absence of possible criticism at the 0.5 level means not only that there is no chance of disciplining the judge, but also that neither party has any reasonable claim that the judge should have decided otherwise.

The present use of the term "probability" should not be misleading to the average lawyer even without choosing among all the different meanings which legal scholars have given to it. See, e.g., Roberts, *Measurement Theory* in 7 *ENCYCLOPEDIA OF MATHEMATICS AND ITS APPLICATIONS* 400-03 (G. Rota ed. 1979) (subjective probability); L. COHEN, *THE PROBABLE AND THE PROVABLE* (1977) (inductive vs. Pascalian probability); Tribe, *Trial By Mathematics: Precision and Ritual in the Legal Process*, 84 *HARV. L. REV.* 1329 (1971); D'Amato, *supra* note 1, at 483-84 (subjective probability).

Later in this essay I will describe a mechanical decisionmaking procedure in which it is defined that any probability of greater than 0.5 automatically means that the claimant will win. See *infra* notes 106-08 and accompanying text. But this mechanized procedure is not rule-based; its probabilities are actually measures of fitness between the facts of the plaintiff's case and the fact-clusters of previously adjudicated cases. Interestingly, if human decisionmakers are used instead of computers, we cannot necessarily say that "greater than 0.5 means a win for the claimant," because the judge, in order to rule for the respondent, can invariably say that what to the attorneys seemed to be a rule greater than 0.5 in favor of the plaintiff was actually, in the judge's judgment, a rule of less than 0.5 in the plaintiff's favor.

[FN13]. Although scientific explanation often consists of forming a hypothesis and making deductions after describing an anomaly (here, that the law is becoming more uncertain) it is also possible to discuss the anomaly after the hypothesis and deduction. See W. HUMPHREYS, *ANOMALIES AND SCIENTIFIC THEORIES* 101 (1968). This latter route is the one I have employed in the present Article. Thus, I suggest a hypothesis to show that the legal system contains a systemic bias to favor the production of legal uncertainty, deduce from that the statement that the law inexorably becomes more uncertain, and finally offer the observation that the law in fact is becoming increasingly uncertain. This process is useful here because the final observation becomes more apparent after one has examined the reasons leading to it. Without those reasons, the "anomaly" might tend to go unnoticed due to the vested psychological interests of legal observers to view their manipulations of the law as rendering the law increasingly clear and certain.

There are parallels to this state of affairs in the history of scientific discoveries. See, e.g., *id.* at 54 ("The novel feature here is that at the time of Einstein's paper [of 1905 on black body radiation] there was no demonstrated need for his explanation"); T. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 112 (2d ed. 1970) ("Therefore, at times of revolution, when the normal- scientific tradition changes, the scientist's perception

of his environment must be re-educated- in some familiar situations he must learn to see a new gestalt.").

[FN14]. O. HOLMES, *THE COMMON LAW* 111-29 (1881); R. DWORKIN, *supra* note 9, at 286; cf. Landes & Posner, *Legal Precedent: A Theoretical and Empirical Analysis*, 19 *J.L. & ECON.* 249, 249-50 (1976) (law tends toward greater specificity). See also L. FULLER, *ANATOMY OF THE LAW* 106-08 (1968) (common law "runs to greater elaboration and a more strenuous efforts to foresee possible contingencies"). Cf. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 *J. LEGAL STUD.* 65 (1977) ("efficient rules survive because they become implicated in lawsuits with lower stakes than do inefficient rules, but author gives no independent test of efficiency, possibly rendering his thesis circular).

[FN15]. R. DWORKIN, *supra* note 9, at 286.

[FN16]. *Id.* I concede that Dworkin himself has not quite made the leap from "antecedent probability of ties" to general legal uncertainty, and so to attribute to him the wrong answers that flow from his model may be unfair. However, the leap is a short one. "Ties," in Dworkin's analysis, can occur only when superhuman (Herculean) judges are unable to choose one of two possible results as the "right" one, while my own notion of uncertainty concerns the logically different difficulty of everyday lawyers in choosing one of two possible results as their prediction of how some everyday judge would decide the case.

But the difference is only one of superhumanity. The existence of ties for Herculean decisionmakers, see *id.* at 105-30, should be strong evidence of uncertainty for ordinary judges and lawyers. Thus, because the increased density of legal information in an "advanced" system allows ties to occur less frequently, we may suppose that the legal system as used by ordinary humans also becomes more certain. Whether Dworkin actually draws this conclusion is unimportant, for his writing reflects a widely held misconception that law waxes certain over time.

In any case, there is doubt as to the usefulness of Hercules as a model for judging. "The illusion that [the judicial process] either is, or can be, super-human constitutes one of the chief hindrances to its substantial reform." J. FRANK, *COURTS ON TRIAL* 2 (1963). See also Hart, *American Jurisprudence Through English Eyes: The Nightmare and the Noble Dream*, 11 *GA. L. REV.* 969, 983-85 (1977) ("different judges coming from different backgrounds may construct different and conflicting Herculean theories").

[FN17]. Indeed, one suspects that the technique used by these publications for reducing the uncertainty in the presentation of law consists of isolating cases and statutes under key words, without confronting overlaps with other key word groupings. For instance, an attorney doing research might feel confident after looking up "guarantee," but then if the attorney happens to look up "collateral," there may be cases or statutes that throw into confusion the materials assembled under "guarantee."

[FN18]. See generally McCree, *Bureaucratic Justice: An Early Warning*, 129 *U. PA. L. REV.* 777 (1981) (discussion of problems presented by the rapidly growing federal

caseload). But see Friedman, *The Six Million Dollar Man: Litigation and Rights Consciousness in Modern America*, 39 MD. L. REV. 661 (1980) (increase of litigation shows increased judicial sympathy for human rights).

[FN19]. Cf. N. GEORGESCU-ROEGEN, *THE ENTROPY LAW AND THE ECONOMIC PROCESS* 115 (1971) ("If this historical trend teaches us anything at all, it is that nothing entitles us to expect that this increasing irregularity will be replaced by some simple principles in the future"); C. PIERCE, *VALUES IN A UNIVERSE OF CHANCE* 174 (P. Wiener ed. 1966) ("Everywhere the main fact is growth and increasing complexity.").

[FN20]. Of course, once a new precedent is established or statute written, some persons will want their conduct to fall squarely within the precedent or statute. If all or most people were like this, Dworkin would be correct in arguing that law would gradually become more certain. But not all people find all law to work to their advantage, and they may prefer to adjust their behavior beyond the scope of particular precedents or statutes.

[FN21]. Cf. Stigler & Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 J.L. & ECON. 1, 12 (1962) (in the context of administrative regulation, "the possibility becomes large that the [regulatory] commission will proudly win each battlefield that its protagonist has abandoned except for a squad of lawyers").

[FN22]. Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 7-1 (lawyer should represent client zealously within the bounds of law). Note the following language from Judge Higginbotham's opinion in *Zenith Radio Corp. v. Matsushita Elec. Indus. Co.*, 402 F. Supp. 251, 262 (E.D. Pa. 1975) (footnote omitted):

Until these motions were briefed and argued, I had never before witnessed at close range a Dionysian intoxication with the creation of intellectual chaos and confusion where none need exist. Defendants' written and oral arguments have amply filled that prior gap in my experience. Throughout the proceedings on these motions, defense counsel have sought earnestly to prove themselves the Lamont Cranstons of our common profession, that is, lawyers endowed with a singular ability to cloud men's minds. Their efforts, however, have ended in failure.

[FN23]. See Cooper, *A Voluntary Tax? New Perspective on Sophisticated Estate Tax Avoidance*, 77 COLUM. L. REV. 161, 163 (1977) ("[T]he real certainties of this world are death and tax avoidance").

[FN24]. For other examples, see Cheung, *Rent Control and Housing Reconstruction: The Postwar Experience of Prewar Premises in Hong Kong*, 22 J.L. & ECON. 27 (1979); Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3 (1971).

[FN25]. See *supra* note 4. If a primitive legal system has only a few rules, it does not thereby become a less certain legal system. Rather, there are, with certainty, fewer causes

of action.

[FN26]. See *infra* text accompanying notes 75-83.

[FN27]. Landes & Posner, *supra* note 14, at 249. Professor Posner has since become Judge Posner of the U.S. Court of Appeals for the Seventh Circuit.

[FN28]. See Klein, Comment, 19 J.L. & ECON. 309, 310 (1976).

[FN29]. Landes & Posner offer this following example of depreciation of precedent:

To illustrate, a decision involving a collision between two horse-drawn wagons is bound to lose some of its precedential value when wagons are replaced by cars and trucks, and a decision turning on the difference between "trespass" and "trespass on the case" may lose all of its precedential value when the common-law forms of action are abolished by statute. In general, passage of time reduces the flow of services of a precedent, and this reduction represents the depreciation or obsolescence of legal capital.

Landes & Posner, *supra* note 14, at 263 (footnote omitted).

[FN30]. As Landes & Posner state:

Suppose that the stock of legal capital, and hence the flow of information on the likely outcomes of potential legal disputes, were temporarily below the desired (long-run equilibrium) level. This might be due to new legislation or other unanticipated changes in economic or social conditions that rendered part of the existing capital stock obsolete. With the resulting increase in uncertainty, more disputes would arise, parties to a dispute would find it more difficult to forecast the outcome of litigation, and litigation would increase. The result would be a temporary increase in the production of precedents (investment) until the discrepancy between actual and desired capital was eliminated. *Id.* at 269-70 (footnote omitted).

[FN31]. The now more experienced Judge Posner still adheres to his earlier position. In his remarks to a luncheon at the Court of Appeals on May 12, 1982, Judge Posner stated that simply increasing the number of precedents also increases the number of particular conflicts that are "solved" by some of the precedents, thereby increasing predictability.

[FN32]. See, e.g., R. POSNER, *supra* note 11; Priest, Selective Characteristics of Litigation, 9 J. LEGAL STUD. 399 (1980).

[FN33]. See Posner, An Economic Approach to Legal Procedure and Judicial Administration, 2 J. LEGAL STUD. 399, 423 (1973) (an earlier, more complete account of the systemic bias argument). Posner acknowledges that this is an uncertainty concept of some sort. See Posner, The Economic Approach to Law, 53 TEX. L. REV. 757, 761 (1975) [hereinafter cited as Posner, Approach to Law]. I will call this concept "lawyers' uncertainty." See *infra* note 35.

It is difficult to understand what Landes and Posner mean by "true probability," apart from the well-considered probability estimates of both opposing counsel. It seems to be

an indeterminable if not metaphysical concept. But see *infra* note 43.

[FN34]. That is, if trial costs are not too high in relation to the amount in controversy.

[FN35]. It is important to be clear about definitions. What I have called "legal uncertainty" is the prediction by an informed group of lawyers that the probability of the plaintiff's prevailing is at or close to 0.5. "Lawyers' uncertainty," on the other hand, reflects disagreement among the lawyers looking at the plaintiff's case. For example, if Irma's lawyers think her chance of winning is 0.7, whereas Jack's lawyers think Irma's chance of winning is 0.4, there is "lawyers' uncertainty" between the predictions of Irma's lawyers and Jack's lawyers. Note that any given prediction by any lawyer as to any case (say, Irma's lawyers think she has an 0.6 chance of winning) is not at all a matter of the individual lawyer's uncertainty. Rather, the lawyer is completely certain (based on training, expertise, and experience) that Irma's chance of winning is precisely 0.6. His certainty reflects his best estimate, in advance of the case, of the odds of Irma's winning. He is certain of his estimate, but at 0.6, the law itself is quite uncertain.

[FN36]. Sometimes-for very good reasons-there is a lawyers' divergence on the same side of a case. See D'Amato, *supra* note 1, at 493-95 (skill, experience, time available, and other factors can cause such divergence).

[FN37]. A little reflection will show that the diminution of certainty has nothing to do with how ancient a precedent is. Old horse-and-buggy precedents that have survived are generally more strongly entrenched because they have been repeatedly affirmed; new Chrysler precedents are subject to attack as having reached an erroneous result (even erroneous in light of the old horse- and-buggy precedent!) The argument that the recent Chrysler case was "wrongly decided" or "not strictly speaking on all fours" with the plaintiff's venerable case, contrary to Landes and Posner, can be just as persuasive as the argument that the old horse-and-buggy precedent is "outmoded."

[FN38]. If either R_{subI} or R_{subJ} is negative, it represents a risk preference, that is, an amount the party would have to receive in order to be persuaded to give up this opportunity to experience risk.

[FN39]. Supposing that $P_{subI} = R_{subJ} = P$, these assumptions are, first, that $R_{subJ}(p) = R_{subI}(1-p)$ (symmetry) and second, that the risk aversion may be closely approximated by twice-differentiable functions whose second derivatives are negative, $\Delta^2 R_{subJ} / \Delta p^2 < 0$ and $\Delta^2 R_{subI} / \Delta p^2 < 0$ (diminishing effects of a change in probability). Note that a different sign on the second derivative entails instead a minimum of total risk aversion at $p = 0.5$. Posner acknowledges that risk aversion decreases the chances of litigation but fails to consider that it may vary with uncertainty. R. POSNER, *supra* note 11, at 437.

[FN40]. In part, higher trial costs follow simply because more information must be produced to decide an uncertain issue. Even the physical limitation of how much

information is sufficient to communicate the judge's decision to the parties depends on how uncertain the decision had been. The more unpredictable the decision, the more physical energy will be required to convey it. J. PIERCE, AN INTRODUCTION TO INFORMATION THEORY 184-207 (2d rev. ed. 1980). Of course, judicial machinery always consumes much more than a minimum of physical energy, but the judge may well have more difficulty in explaining the reasons for his decision of a difficult case. Consequently, the judge might require the parties to be more thorough in their briefs and arguments to the court, might certify questions to the appellate court, and so forth.

[FN41]. If I undertook an empirical study of my own and found, as I have predicted, that litigants will shy away from trials involving uncertain legal issues, then the argument would follow that those uncertain issues would tend to "survive" in the law over time. See Cooter & Kornhauser, Can Litigation Improve the Law Without the Help of Judges?, 9 J. LEGAL STUD. 139, 150-56 (1980).

[FN42]. But even if the mechanism for restoring certainty were correct, Landes and Posner argue only that it is sufficiently "quick" to counteract the relatively slow depreciation of precedents induced by antiquity or occasional statutory activity. In the empirical part of their study, Landes and Posner found the "half lives" (median age of precedents used by given courts) of sample precedents to be on the order of 5 to 20 years. Landes & Posner, *supra* note 14, at 255-59.

I shall show more powerful tendencies of the law to become uncertain, which new litigation may have difficulty undoing (and which "half lives" of precedents measured by the frequency of their citation would not have revealed). Indeed, to the extent that the precedents produced by litigation are perceived as a cure for uncertainty, the litigation will be pushed beyond the effective scope of the precedents, into so-called "factual" matters. Note that Posner's later restatement of the analysis specifically excludes "factual" uncertainty: "Uncertainty can be either factual or legal but only legal uncertainty is relevant here (why?)." R. POSNER, *supra* note 11, at 422. The "answer" that Posner gives in his Teacher's Manual simply restates the question in declarative sentences. See R. POSNER, TEACHER'S MANUAL FOR ECONOMIC ANALYSIS OF LAW 79 (2d ed. 1977).

[FN43]. This may in fact be what Landes and Posner mean by "true probability." See *supra* note 33. The true probability of Irma's winning a given case is 1.0 if it turns out that she in fact won. The measure of divergence between her attorneys' ex ante prediction of the odds of her winning and the "true probability" as thus defined is simply a measure of the probability that she will lose. Thus, if this is what Landes and Posner mean, they only introduce an unnecessarily cumbersome mathematical term.

[FN44]. A question that may occur to some readers is whether there is a parallel between legal uncertainty and Heisenberg's famous uncertainty principle in quantum mechanics. The early popular version of Heisenberg's theory, which is still valid on its own terms, is that measuring anything disturbs it—the measuring instrument displaces that which it measures. In the world of quantum mechanics, the effect is significant: an electron

microscope uses a stream of electrons to "see" microparticles, but interferes with them in the process. Analogously, we might feel that we know what the law is, or what the Constitution says, before a case is brought; but that the very process of litigating the case will change the judges' perception of the law, so that the law as announced in the decision may be different from the law before the case was brought (even if the difference is only slight). In other words, if a case is a measurement of what the law is, the case itself disturbs the law that it is trying to measure.

As I have argued, however, previously, a good lawyer in predicting the law tries to take into account her own ability to argue the case, in addition to what the law seems to be. See D'Amato, *supra* note 1, at 492-95. This is no exact science, but at least the measurement error is taken into account in making the prediction.

In fact, Heisenberg's theory of uncertainty was more profound and more disturbing. He, and other early investigators of quantum mechanics, found that one could not measure with arbitrary accuracy the position and momentum of a subatomic particle simultaneously. Einstein challenged this view in 1935, in Einstein, Podolsky & Rosen, *Can quantum mechanical description of reality be considered complete?*, 47 *PHYS. REV.* 777 (1935). Greatly simplified, Einstein's position is that if you take a pair of protons, a pair being defined as two protons moving together whose position, momentum, and spin are directly related, then a measurement can be made with arbitrary accuracy of the position of proton A and of the momentum of proton B. By calculation, the momentum of A can be deduced with arbitrary accuracy at the position at which A was measured. In the 1950's, when Bell devised his statistical inequality formula, Einstein's position could be tested empirically. It was found that when A's position was measured proton B's position was disturbed even though B was entirely separate from A. The result is a currently insoluble challenge to our theory of reality at the microcosmic level.

Apparently, the basic constituents of matter are inherently unspecifiable; at its most fundamental level, the universe is uncertain. However, despite the argument of the present Article, the law is not inherently uncertain. Given agreed upon facts, the law can be made completely determinable by a computerized decisional procedure I shall describe later. See *infra* text accompanying notes 106-08.

[FN45]. R. COX, *THE ALGEBRA OF PROBABLE INFERENCE* 35-40 (1961); D. MACKAY, *INFORMATION, MECHANISM AND MEANING* 56-57 (1969); Martin & England, *Mathematical Theory of Entropy*, in 12 *ENCYCLOPEDIA OF MATHEMATICS AND ITS APPLICATIONS* 51 (G. Rota ed. 1981). A quantitative measure of information, *M*, may be derived from the following premises:

(1) The decision of a perfectly certain case produces no information. (When the outcome of a case is perfectly certain, the judge presumably can do nothing but what was predicted, and by doing so adds nothing to the substantive content of the law.)

(2) If one outcome has a smaller probability of occurring than another, then a decision choosing the first outcome produces more information than a decision choosing the second. (When a judge comes closer to doing what is expected-chooses a result whose antecedent probability was high-she produces less surprise and thus less new information relevant to a future prediction than when she chooses a less probable result.)

(3) The information produced by the simultaneous decision of two independent cases is

the sum of the information their decisions would produce individually.

The measure of information that follows from these premises is $M = - \sum p_i \log p_i$ where p_i is the antecedent probability of the case being decided by the outcome of i of n possible outcomes. For a proof of this assertion, see Martin & England, *supra*, at 52. When there are only two possible outcomes, $n = 2$, the information produced by the decision is maximized when each outcome was equally likely, $p_1 = p_2 = 0.5$. Increasing the number of possible outcomes, e.g., by adding more parties with diverse interests to the dispute, also tends to increase the information produced by the dispute's decision.

[FN46]. See, e.g., Landes & Posner, *supra* note 14, at 272-73 ("One approach [to why judges would participate in precedent production] is to posit that the independent judge derives utility by imposing his policy preferences on the community.").

Lower-court judges, however, may be more likely to perceive their duty as following the law and not making it. Nevertheless, to the extent that law is shaped by appellate court judges who are more inclined to make law than follow existing rules, it should be true that those who are in a position to create new law are those who are more likely to maximize information value.

[FN47]. See *supra* text accompanying notes 15-26.

[FN48]. R. DWORKIN, *supra* note 9, at 111-15.

[FN49]. The element of factual choice is not always evident to readers of the judicial opinion—students in law school, attorneys doing research, even other judges researching future cases. To them, the "facts" of the case are those recited by the judge who made the original decision. Far less apparent is the high degree of selectivity exercised by that judge in reporting certain facts and not others.

[FN50]. See, e.g., *Sutton v. City of Milwaukee*, 672 F.2d 644 (7th Cir. 1982) (Posner, J.) (no notice required before police tow illegally parked cars, distinguishing case requiring notice before police tow abandoned cars on basis that abandoned cars are not likely to be moved).

[FN51]. Cf. Reynolds & Richman, *An Evaluation of Limited Publication in the United States Courts of Appeals: The Price of Reform*, 48 U. CHI. L. REV. 573, 627 (1981) (discussing nonpublication of decisions that lack new information).

[FN52]. See *infra* notes 93-100 and accompanying text.

[FN53]. A preliminary caution regarding many of the arguments in this Section is that I cannot say that such arguments are based on empirical research or someday will be based on such research. Any kind of test that I can conceive of would seem to depend on interviews with actors engaged in the litigation process who either might not be forthright with the interviewer (especially if they have lost the litigation in question) or who might

genuinely be incapable of accurate introspection. Yet the absence of available or foreseeable empirical testing should not automatically disqualify this or any other argument, for the reader may always judge the soundness of a position based on the reader's own experience.

[FN54]. See Fuller, American Legal Realism, 82 U. PA. L. REV. 429, 446-47 (1934); D'Amato, Towards a Reconciliation of Positivism and Naturalism: A Cybernetic Approach to a Problem of Jurisprudence, 14 W. ONT. L. REV. 171, 199- 201 (1975).

[FN55]. "[T]he court decides the case at hand and not the cases that have not arisen But it is one thing to anticipate such future cases that perhaps may be distinguishable, without now deciding the sufficiency of the distinction. It is quite another thing to judge the instant case in terms that are quite plainly unacceptable in light of other cases that it is now clear are covered by the principle affirmed in reaching judgment and indistinguishable upon valid grounds." Wechsler, The Nature of Judicial Reasoning, in LAW AND PHILOSOPHY 290, 297-98 (S. Hook ed. 1964).

[FN56]. See D'Amato, *supra* note 1, at 490-91.

[FN57]. If it could also be shown that it is easier-less costly-to unravel a rule than to preserve it, we would have an independent reason to support an inexorable trend toward uncertainty in the law. One idea that may come to mind is the notion of entropy in physical chemistry. See generally J. WASER, BASIC CHEMICAL THERMODYNAMICS 70-84 (1966). One might analogize a legal rule to driving a new car-it is easier to scratch or dent the finish of the new car than it is to prevent all scratches and dents. Rules of law seem to be delicate structures, easily made, increasingly ambiguous and uncertain with each new application, and only with great difficulty preserved in their original form, meaning, intent, and purpose.

"Entropy" may be defined as disorder, so that increasing the entropy of a substance increases its physical disorder: "when you melt a crystal, since you thereby destroy the neat and permanent arrangement of the atoms or molecules and turn the crystal lattice into a continually changing random distribution," you are increasing the crystal's entropy. E. SCHRODINGER, WHAT IS LIFE? 78 (1967). The concept of entropy been found useful for modeling urban movement, see A. WILSON, ENTROPY IN URBAN AND REGIONAL MODELLING (1970); various economic activities, see N. GEORGESU-ROEGEN, *supra* note 19; and in information theory, see J. PIERCE, AN INTRODUCTION TO INFORMATION THEORY (1980); see also R. COX, *supra* note 45; D. MACKAY, *supra* note 45. The information entropy model, in particular, describes what judges would do in order to maximize the information contained in their decisions.

In order to use entropy in law directly, the legal scientist would have to embed the collection of predictions we call law into an abstract space that exhibited the variations in the level of uncertainty of the predictions. The scientist would then show that the working and reworking of legal materials through the process of litigation, by reference to the corresponding transformations on the abstract space, would increase uncertainty. The problem with this straightforward (but abstract and mathematical) plan for demonstration

of entropy-like legal uncertainty is that the embedding of law into an abstract space is really no more easy than putting the law exactly into words. Since law cannot be completely transcribed into words, it cannot be transcribed into symbols and spaces either. See Farago, *supra* note 4, at 195.

Apart from the proof of the correctness of the entropy model, let us suppose it is appropriate and draw whatever conclusion would follow. If an entropy model is correct, we could expect not only that the subjective probability of one out of two outcomes occurring will approach one-half, but that new alternatives would appear, the subjective probability of each approaching the reciprocal of their number. Thus, given a distribution of possible outcomes to a dispute with corresponding probabilities $p_{sub i}$, $1 \leq i \leq n$, the entropy measure of uncertainty is H . If there are only two possible outcomes to a dispute, $n = 2$, then the entropy is at a maximum when both outcomes are equally likely, $p_{sub 1} = p_{sub 2} = 0.5$. Indeed, for any fixed n , entropy is maximized when $p_{sub i} = 1/n$ for each $1 \leq i \leq n$. Thus, if legal entropy is to increase without bounds, the diversity of possible results should become greater with the probability of each result approaching the reciprocal of their number, $1/n$.

[FN58]. Irma's expected return, E , is $P_{sub I} \times A - T_{sub I}$, where $P_{sub I}$ is her probability of winning and $T_{sub I}$ is her transaction costs. If Irma is economically rational, she would sue only when E is not negative. Thus if $P_{sub I} = 0.7$ and $A = \$10,000$, Irma would sue only if $T_{sub I}$ does not exceed \$7,000. If $P_{sub I}$ is 0.5, Irma would sue only if $T_{sub I}$ is not more than half of A .

[FN59]. *A fortiori*, an overruled case is not extinguished. The very possibility of judicial overruling means that the overruling decision can itself be overruled. Even if a constitution contains "entrenched" clauses that by the constitution's own prescribed amendment procedures cannot be amended, the law typically gets around the restrictions of those amendment procedures. See P. SUBER, *THE PARADOX OF SELF-AMENDMENT: A STUDY OF LOGIC, LAW, OMNIPOTENCE, AND CHANGE* (1982) (forthcoming book on file at the Northwestern University School of Law library).

[FN60]. The proposition may seem obvious, but it only works because any legal system requires the payment of transaction costs by the parties. In the absence of transaction costs, there would be no disincentive to sue. Even the most uncertain, frivolous rule would be worthwhile alleging in a complaint if there were any chance, however minimal, of recovery. Irma could sue the telephone company for a billion dollars for restraint of trade; if the lawsuit is completely costless to her, why not take a chance, however minimal, of winning that amount? But the transaction costs immediately deter this and millions of other imaginable but frivolous lawsuits.

Low-probability lawsuits are deterred even more under a "British" system where the losing party pays the winning party's transaction costs. See *infra* note 62.

[FN61]. If they are less, as I will argue they are (see *infra*, text section (iii)), Jack could spend the difference in additional legal creativity to discourage Irma from suing and to

render the law less certainly applicable to his activities.

[FN62]. Under a "British" system, Irma's expected recovery would be $0.9 \times (\$5,000 + \$3,000) - (0.1 \times \$3,000) - \$3,000 = \$3,900$. In words, Irma has a probability of 0.9 to recover the amount of her damages plus her transaction costs. She also has a probability of 0.1 of losing and thus having to pay Jack's transaction costs of \$3,000. Finally, her \$3,000 in transaction costs are sunk, and must be accounted for apart from her probability of recovering them. Similarly, Jack's expected loss would be $(0.9 \times \$8,000) - (0.1 \times \$3,000) + \$3,000 = \$9,900$. Thus, the difference between Irma's expected win and Jack's expected loss remains \$6,000 in the "British" system. This result obtains because no matter what system is devised for payments between Jack and Irma, the transaction costs are "lost" to the legal system by both parties.

The "British" system may operate psychologically to increase Jack's incentive to purchase legal creativity to modify his conduct, because the less certain Jack can make the rule, the more sharply Irma may be discouraged from initiating litigation. To see why this is so, recall that at the 0.9 level of certainty, Irma could expect to recover \$3,900 under the British system. In the American system, under the same facts Irma could expect to recover only \$1,500. But the most that Irma could lose would be \$6,000 in the British system (transaction costs of both parties) and only \$3,000 in the American system. At the 0.9 level, we might assume that Irma would prefer the British system to the American because her expected recovery is \$2,400 higher. But as Jack drives Irma's chances downward (by adjusting his conduct), the British system may work against Irma. At the 0.5 level, Irma has a 50% chance of losing \$6,000, whereas in the American system she would have a 50% chance of losing only \$3,000. This fear of loss to the complaining party in the British system should act as a psychological disincentive to initiating litigation where the rule of law is uncertain.

Hence, under the British system, we might expect the law on the books to cover even fewer real-world activities than the law on the books covers in the United States. At the same time, because fewer lawsuits will be brought under the British system when the law is uncertain, we might expect the law on the books itself to be less riddled with exceptions and ambiguities than the American counterpart. The net effect will be that while the law in a British system will be clearer when it does apply, it will apply to fewer transactions than in the American system.

[FN63]. For example, Jack's attorney might advise Jack to hand Irma an offering circular, prepared by the attorney, which will contain a long list in legal language of the possible risks of the investment, including the risk that Jack may have verbally misrepresented the true risks. It would contain a statement that the prospective investor should disregard any verbal representations made to her. Jack would then be advised to tell Irma that the offering circular contains legal language insisted upon by the overly conservative attorney. Jack would also give Irma very little time to read the document before she makes the investment.

[FN64]. For example, Irma might be able to spend \$2,000 to uncover evidence that Jack's attorney was implicated in a scheme to defraud her. However, in practice such evidence

would be difficult to get. Generally speaking, Irma will probably not counter Jack's expenditure with an equivalent one of her own because it is more cost-effective for Jack to modify his conduct than for Irma to prevent or undo the modification. See *infra* pp. 32-33.

[FN65]. There is, to be sure, a disparity in that Irma will be more deterred from spending money to invoke the litigation machinery than Jack will be deterred from spending the same money to modify his conduct. This disparity exists partly because Jack acts first, and can modify his behavior to raise his expected value if Irma sues him. Irma, acting after Jack's modified behavior, will recognize that the expected value of her lawsuit is less than she thought it would have been before she entered into the transaction with Jack. Where the new expected value is less than zero, she should not sue at all. Where it is positive but close to zero, she will be deterred in some cases from invoking the litigation machinery because of the uncertainties involved in future litigation, because of risk aversion, or because of other psychological factors linked with a lowering of her expectations. Such deterrence will always exist, even in a small degree, as long as Irma is forced into the position of having her expectations downgraded as the result of Jack's conduct modification.

But even if Irma decides to sue in some of these cases, Jack's investment in conduct modification is still money well spent. By reducing Irma's probability of winning, Jack has increased the chances that she will settle and that the settlement will be at a lower dollar value. See *supra* text accompanying notes 53-57.

[FN66]. Even if Irma could recover some or all of her costs in a "British" system if she wins the litigation, the mere presence of transaction costs acts as a deterrent to initiating the lawsuit. See *supra* note 62.

[FN67]. Kahneman & Tversky, *The Psychology of Preferences*, 245 *SCI. AM.* 160 (1982); Tversky & Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 *SCIENCE* 453 (1981); Kahneman & Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263 (1979); H. RAIFFA, *DECISION ANALYSIS: LECTURES ON CHOICES UNDER UNCERTAINTY* (1968).

[FN68]. Samuelson, 1981 Nobel Prize in Economics, 214 *SCIENCE* 520, 521 (1981).

[FN69]. Bentham illustrated his view:

Do you know how they make [the common law]? Just as a man makes laws for his dog. When your dog does anything you want to break him of, you wait until he does it and then beat him. This is the way you make law for your dog, and this is the way judges make laws for you and me. They won't tell a man beforehand.... The French have had enough of this dog-law; they are turning it as fast as they can into statute law, that everybody may have a rule to go by

5 J. BENTHAM, *THE WORKS OF JEREMY BENTHAM* 235 (Edinburgh 1843). See J. BENTHAM, *AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION* 335 (Lafleur ed. 1948) ("uncertainty is of the very essence of [the

common law]").

[FN70]. See Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 820 (1935) ("In every field of law we should find peculiar concepts which are not defined either in terms of empirical fact or in terms of ethics but which are used to answer empirical and ethical questions alike Legal arguments couched in these terms are necessarily circular, since these terms are themselves creations of law").

[FN71]. L. FULLER, *supra* note 14, at 166-69. The following statute speaks for itself:
"When rules are inconsistent or conflict with other rules, then compliance with any such inconsistent or conflicting rule shall be deemed to be compliance with all such inconsistent or conflicting rules."
Me. Rev. Stat. Ann. tit. 5, § 8059 (Supp. 1982), quoted in *The New Yorker*, Nov. 22, 1982, at 178.

[FN72]. J. MERRYMAN, *THE CIVIL LAW TRADITION* 62 (1969).

[FN73]. Gilmore, *Commercial Law in the United States: Its Codification and Other Misadventures*, in *ASPECTS OF COMPARATIVE COMMERCIAL LAW: SALES, CONSUMER CREDIT, AND SECURED TRANSACTIONS* 449, 450 (J. Ziegel & W. Foster eds. 1969).

In the nineteenth century, Judge Story emphasized the uncertainty inherent in legislative language:

[H]uman language is, at the best, so inaccurate an instrument; there being often numerous different senses in which the same word is understood that there are, and always will be, a multitude of doubts concerning the meaning of the best drawn statutes. And all such doubts would be pure additions to those which now arise from other sources. This source of doubt does not exist in unwritten law.

See Joseph Story's Report to the Governor of Massachusetts (1836), reprinted in *REPORT OF THE SPECIAL COMMITTEE TO URGE THE REJECTION OF THE PROPOSED CIVIL CODE OF THE NEW YORK BAR ASSOCIATION* 36 (1882).

See also J. CARTER, *THE PROPOSED CODIFICATION OF OUR COMMON LAW* 83 (1884): [W]henver statutory law, in its application to an unknown case, is found to work injustice in consequence of the case not having been foreseen, the effort and the tendency always is to impose violently upon the statute an interpretation not in harmony with the natural meaning of its language. In every such case, it is highly uncertain whether the effort would succeed. And this is a source of uncertainty unknown to unwritten law.

[FN74]. In contrast the common law, by itself, is a collection of decisions upon facts. A new case is decided on the basis of its closest analogy to a prior case. "Rules" are not a necessary part of the common-law process, and even though judges supply "rules" in their opinions, these are mere rationales for a result that may be upset if someone later finds a better rule explaining more satisfactorily the fit between two decisions.

[FN75]. J. BENTHAM, *OF LAWS IN GENERAL* 156-83 (H.L.A. Hart ed. 1970);

H.L.A. HART, *THE CONCEPT OF LAW* 121-32 (1961); R. DWORKIN, *supra* note 9, at 14-45.

[FN76]. See D'Amato, *supra* note 54, at 200.

[FN77]. See D'Amato, *supra* note 4.

[FN78]. The impracticality of overly specific rules may be illustrated by the two-way television set in George Orwell's novel, 1984. See G. ORWELL, 1984 (1949). Winston Smith is performing his health exercises in front of his television when the woman demonstrating the exercises points her finger at the camera and by name instructs Smith to bend lower and try harder. *Id.* at 33- 34. Her instruction to him is an example of a totally specific legislative rule.

Orwell has captured an important characteristic of legislation-that it represents the voice of the few reaching out to the many. But what is lacking in Orwell's image is how the situation would bog down in practice. If five million citizens are all dutifully doing their morning exercises, the instructor would have to have five million TV monitors in her studio to be able to single out those who like Winston Smith were not performing adequately. Once her attention is given to Smith, several hundred thousand other disgruntled exercisers would begin a mild form of civil disobedience-taking a break while Winston is being verbally disciplined. Then presumably the instructor would start screaming at them one by one, to the eventual breakdown of the entire program. An obvious but self-defeating way to cure the problem would be to have five million legislator-instructors at the studio each watching a TV monitor so that a one-to-one observational situation may be maintained. But who would guard the guardians?

[FN79]. Professor Hart has divided the situations in which a rule might apply into the "core" and "penumbra," stating that core instances, at least, apply with certainty. Hart, *Positivism and the Separation of Law and Morals*, 71 *HARV. L. REV.* 593, 607-15 (1958). Hart's formulation only raises the level of inquiry, however, without solving the problem; now we must ask whether the proposed application of a rule falls within the "core" or the "penumbra." See D'Amato, *supra* note 54, at 187-88. Thus, the core/penumbra idea does not help us determine whether a rule applies to a given set of facts.

For example, Hart says that a "No Vehicles in the Park" sign clearly applies to automobiles, even though many "penumbral" applications are open to dispute (motorized wheelchairs, bicycles, skates). H.L.A. HART, *supra* note 75, at 104. Yet Hart's inclusion of all automobiles in the rule's core would bar from the park an automobile used for an emergency-for instance, to rush someone directly to a hospital if there are no telephones to call an ambulance. Other possible exceptions to the rule may be imagined. The greater the number of exceptions, the more difficult it is to identify the line between the core and the penumbra, and to know what the law is with certainty. D'Amato, *supra* note 54, at 188-92; Fuller, *Positivism and Fidelity to Law-A Reply to Professor Hart*, 71 *HARV. L. REV.* 630, 663 (1958).

[FN80]. See D'Amato, *supra* note 54, at 188-91.

[FN81]. See BLACK, BLACK'S LAW DICTIONARY 1170-71 (4th ed. 1951); *id.* 918 (5th ed. 1979) (retaining "unlawful" in the definition of "murder").

[FN82]. See D'Amato, *supra* note 4, at 74.

[FN83]. I am indebted for this particular illustration to Professor Richard Epstein.

[FN84]. For a criticism of Professor Greenawalt on this position, see D'Amato, *supra* note 4, at 93-95.

[FN85]. See *supra* note 52 and accompanying text.

[FN86]. Hohfeld, Some Fundamental Legal Conceptions as Applied in Judicial Reasoning, 23 YALE L.J. 16 (1913).

[FN87]. But see Kennedy & Michelman, Are Property and Contract Efficient?, 8 HOFSTRA L. REV. 711, 752 (1980).

[FN88]. Calabresi & Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089 (1972).

[FN89]. See generally 4 S. WILLISTON, A TREATISE ON THE LAW OF CONTRACTS § 600A (1961) (on construction and interpretation).

[FN90]. See generally 3 A. CORBIN, CORBIN ON CONTRACTS § 535 (1963) (on construction and interpretation).

[FN91]. See I. MACNEIL, THE NEW SOCIAL CONTRACT (1980).

[FN92]. See Vienna Convention on the Law of Treaties, art. 31, 8 I.L.M. 679, 691-92 (1969).

[FN93]. For sources rejecting the economic analysis approach in tort theories, see, e.g., Epstein, A Theory of Strict Liability, 2 J. LEGAL STUD. 151 (1973); D'Amato, The "Bad Samaritan" Paradiagn, 70 NW. U.L. REV. 798 (1975); Fletcher, Fairness and Utility in Tort Theory, 85 HARV. L. REV. 537 (1972). See generally C. FRIED, RIGHT AND WRONG (1978).

[FN94]. R. POSNER, ECONOMIC ANALYSIS OF LAW, 4, 31, 44, 64 (1st ed. 1972).

[FN95]. See Posner, Approach to Law, *supra* note 33, at 777-78 (efficiency as justice). See also Stigler, The Law and Economics of Public Policy: A Plea to the Scholars, 1 J. LEGAL STUD. 1, 12 (1972); Williamson, Transaction-Cost Economics: The Governance

of Contractual Relations, 22 J.L. & ECON. 233 (1979).

[FN96]. See Dworkin, *Is Wealth a Value?*, 9 J. LEGAL STUD. 191 (1980).

Another problem with the economic analysis of law approach may be that sharp disagreement among economic experts will more likely confuse than enlighten judges and juries. Economics speaks not "ex cathedra, but with babble of voices." L. SULLIVAN, *HANDBOOK OF THE LAW OF ANTITRUST* 6 (1977) (discussing antitrust law). Further, the closer that economics might come to mathematical precision, the more likely it is that a "Godel" problem will arise, where no improvement in the system's postulates will suffice to answer as a formal matter all the economic-law problems that may confront it. See generally E. NAGEL & J. NEWMAN, *GODEL'S PROOF* (1958).

[FN97]. M. MCDOUGAL, *STUDIES IN WORLD PUBLIC ORDER* 32-36 (1960).

[FN98]. Cf. A. D'AMATO, *supra* note 9, at 218-20 (discussing whether Lasswell's values are universal).

[FN99]. Cf. Englard, *The Failure of Economic Justice* (Book Review), 95 HARV. L. REV. 1162, 1176-78 (1982) (reviewing R. POSNER, *THE ECONOMICS OF JUSTICE* (1981)) (personal values should not be subsumed under a cost-benefit calculus).

[FN100]. If judges were in fact motivated to increase legal certainty, then they might seize upon a theory such as economic analysis of law as a normative guide to decisionmaking even though the theory itself has no normative content. But judges tend to maximize the information value of their decisions with some consequent detraction from the "value" of legal certainty, see *supra* text accompanying notes 45-51, especially because there would be no perceived normative loss in doing so. Moreover, it is far from evident that economic analysis provides a clear guide to judicial decisionmaking. While Professor Posner and others have claimed that it does so, as more scholars and judges become acquainted with economic jargon, they may find that it is as uncertain a guide to decisionmaking in law as critics of the "worldly philosophers" have found economics to be an uncertain guide to decisionmaking in politics. See generally R. HEILBRONER, *THE WORLDLY PHILOSOPHERS* (1972).

[FN101]. Criminal law of course attempts to deter conduct. However, the more precisely and lengthy the criminal statute, the more likely a criminal may avoid the terms of the statute while accomplishing his goal. Criminal law might work best as common law (as it does in many undeveloped societies), but the perceived need for notice in criminal law appears to rule out any such method. See Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1691 (1976) (criminal law is preventive, not facilitative).

[FN102]. Reducing the volume of legislation may result in increasing the number of private contracts. Professor Milton Friedman acknowledges that with debureaucratization may come an increase in private-remedy litigation. See M. FRIEDMAN, *CAPITALISM*

AND FREEDOM 22-35, 137-60 (1962). Yet private contracts are fashioned specifically to meet the needs of the parties, whereas general legislation is a legislature's attempt to predict the needs of constituents. The latter is more likely to miss the mark, resulting in more uncertainty as parties and courts attempt to divine the legislative intent. The overwhelming majority of private contracts do not result in litigation, primarily because the private regimes they create are understood by both parties and are interpreted by both parties relationally (in the context of their ongoing relationship) rather than discretely as courts tend to do. See I. MACNEIL, *supra* note 91, at 59-63.

[FN103]. Lest this statement excite champions of taxation of corporations, I argue that corporate taxes are necessarily regressive. Any tax on a corporation is a cost of doing business that is passed on to consumers generally. A flat rate tax on persons would ensure that any transfer of wealth from a corporation to an individual would be taxed. Hence it would become irrelevant that the corporation (or trust or estate) might itself amass greater wealth if it were not directly taxed.

[FN104]. G. CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* (1982).

[FN105]. *Id.* at 111-12.

[FN106]. D'Amato, *Can/Should Computers Replace Judges?*, 11 *GA. L. REV.* 1277 (1977).

[FN107]. Another important reason is the possible existence of a human component in decisionmaking that cannot be captured by the literalness of a mechanized process. For a fascinating general discussion, see N. WIENER, *GOD & GOLEM, INC.* 54-85 (1964).

[FN108]. D'Amato, *supra* note 106, at 1288-90. In that Article, I did not deal with the question of what would happen if two precedents in a jurisdiction were in conflict with each other. One method to resolve the conflict would be to instruct the computer that if two precedents are in conflict, it should choose the one that is more recent in time. It would also be possible, however, that the two precedents are actually different. Precedents seem the same when we look at the court's rationale, its decisional "rule." But if we were to ignore the rule, as we would do in the algorithm I have proposed, there may appear factual differences between the two cases.

[FN109]. Nevertheless, Professor Rorty has provided an extremely inventive example. See R. RORTY, *PHILOSOPHY AND THE MIRROR OF NATURE* 70-98 (1979).

[FN110]. J. FINNIS, *NATURAL LAW AND NATURAL RIGHTS* 100-27 (1980).

[FN111]. The importance of this reliance interest in law generally is analogous to the reliance interest in private-law contracts. See Fuller & Perdue, *The Reliance Interest in Contract Damages* (pts. 1 & 2), 46 *YALE L.J.* 52 (1936), 46 *YALE L.J.* 373 (1937).

[FN112]. See M. PERRY, *THE CONSTITUTION, THE COURTS, AND HUMAN RIGHTS* 76-90 (1982); cf. Grey, *Do We Have an Unwritten Constitution?*, 27 *STAN. L. REV.* 703 (1975).

[FN113]. Professor Perry believes these developments are beyond any claim to constitutional interpretation. M. PERRY, *supra* note 112, at 76-90. I contend, however, that Perry, like many other young constitutional scholars, has failed to sense the legal world view of the framers of the Constitution. This world view was teleological, naturalistic, and Aristotelian (through the lens of the medieval scholasticists). The very idea of "due process of law" would not have made sense to them absent the naturalistic conception of "law." Today, too many writers focus on the first part of the phrase ("due process") and forget the important substantive link to the rest of the phrase ("of law").

[FN114]. See G. CALABRESI, *supra* note 104, at 101-09.

[FN115]. For a good recent account, see M. PERRY, *supra* note 112, at 97-114.

[FN116]. See Martineau, *Book Review*, 57 *N.Y.U. L. REV.* 346 (1982) (reviewing S. MENTSCHIKOFF & I. STOTZKY, *THEORY AND CRAFT OF AMERICAN LAW* (1981)).