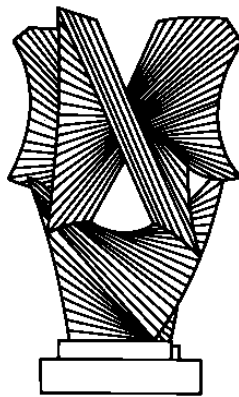


CHICAGO

JOHN M. OLIN LAW & ECONOMICS WORKING PAPER NO. 190
(2D SERIES)



Trade Secrets as Private Property: Their Constitutional Protection

Richard A. Epstein

THE LAW SCHOOL
THE UNIVERSITY OF CHICAGO

June 2003

This paper can be downloaded without charge at:
The Chicago Working Paper Series Index: <http://www.law.uchicago.edu/Lawecon/index.html>
and at the Social Science Research Network Electronic Paper Collection:
http://ssrn.com/abstract_id=421340

Trade Secrets as Private Property: Their Constitutional Protection

Richard A. Epstein*

The field of intellectual property is a growth industry that may involve an unintended consequence of Moore's Law in that the number of published articles in the field doubles on average every eighteen months. Most of that increased effort has been devoted to copyright and patents. But intellectual property also includes the difficult and critical area of trade secrets. The current definition of a trade secret allows for protection of information of any sort: "A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others."¹

The logic for protecting trade secrets parallels that for patents and copyrights. People will not develop certain forms of information at private cost if the benefits of that information can be immediately socialized by the unilateral actions of others. Patents allow for exclusivity only for individuals who disclose their information, which in some cases, e.g. processes and know-how, undermine its value to its owner because it is difficult to monitor its use by others. Trade secrets offer both an alternative to patent protection for inventions, and an exclusive source of protection to matters as diverse as know-how, recipes, and customer lists. Unlike the holder of a patent, the "owner" of the

* James Parker Hall Distinguished Service Professor of Law.

¹RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995). In some sense I prefer the highly influential but somewhat archaic view of trade secrets in the Restatement of Torts:

A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers.
RESTATEMENT OF TORTS §757 cmt. b. (1946).

trade secret (if we may use that phrase) loses all grip once the trade secret is disclosed, no matter how much labor went into the creation of that secret. He is vulnerable to the chance discovery of the secret and to reverse engineering. Ironically, it is quite possible that one owner of the trade secret is unaware that it is possessed by a second owner, who also has a strong incentive to keep it private.

Unlike patents and copyrights, trade secrets are protected primarily by state law rules, with some limited federal protection thrown into the mix.² One gap in the system leads to a loss of protection for everyone, so that the gains from a uniform and consistent set of rules for trade secrets are enormous, but those gains can be realized only through consistent interpretation and enforcement of the rules. For the most part, this congruence has taken place on the subconstitutional level. However, the constitutional dimensions of trade secret law are important when trade secrets are subject to federal and state regulation. This constitutional importance is often on grounds of health and safety regulation as it relates to the takings clause.

In dealing with this problem it is important not to overestimate the distinctive nature of intellectual property and underestimate its continuity with tangible forms of property. Indeed, the case law on this subject offers a back-handed vindication of this thesis by its excessive reliance on and misapplication of the now-canonical but intellectually defensible distinction between physical and regulatory takings.³ I hope to show how these difficulties play themselves out in connection with two key cases under

²*See, e.g.*, Economic Espionage Act of 1996, Pub. L. No. 104-294 110 Stat. 3488 (codified at 18 U.S.C. §§ 1831-1839 (1999)).

³*See, e.g.*, *Lucas v. South Carolina Coastal Comm'n*, 505 U.S. 1003 (1992).

the takings clause—the now venerable decision in *Monsanto Co v. Ruckelshaus*,⁴ and the more recent First Circuit decision in *Philip Morris v. Reilly*.⁵

The takings clause to the United States Constitution provides: “nor shall private property be taken for public use, without just compensation.”⁶ Quickly summarized,⁷ a complete interpretation of the clause requires a court to address four questions: Has private property been taken? If so, was there some justification for that taking under the police power? If not, was the taking for a public use? And if so, has just compensation been provided? The actual articulation of each of these elements bristles with difficulties in ordinary cases associated with land. We should not be surprised to find that these problems will surface in the more specific context of trade secrets, where the intangible nature of the right adds yet another layer of interpretive difficulty.

I. TRADE SECRETS AS PROPERTY

The first question requires us to decide whether trade secrets should be treated as property at all. The question is of no little importance because if trade secrets are treated as mere contract rights, then they are good only against the promisor. But if they are treated as property rights, then in a stronger sense they provide exclusive rights that bind the world. One possible argument against treating trade secrets as property is that they do not satisfy this exclusivity condition because the holder of the secret has no way to know whether others have independently developed the trade secret on their own. Indeed, under the customary formulation of the doctrine, other individuals have a privilege to reverse

⁴467 U.S. 986 (1984).

⁵312 F.3d 24 (1st Cir. 2002).

⁶U.S. CONST. amend. V.

⁷See generally RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN (1985).

engineer the trade secret for their own use.⁸ The configuration of the right therefore looks quite different from that associated with land or patents, but not, on this point at least, with copyrights, where the independent creation is a defense against a charge of copying.

In consequence of these arguments, Pamela Samuelson has forcefully argued that trade secrets should not be considered as a form of property at all, but should rather be understood as a series of undertakings that bind individuals who have received a trade secret in the course of some confidential relationship.⁹ She acknowledges of course that trade secrets are alienable and descendible, but does not think that trade secrets rate as property interests because they lack that in rem feeling. They are not good against the rest of the world in the sense that the law will not prevent anyone from making an independent acquisition of the information in question, or indeed from finding by lawful means the trade secret, and using it to his own advantage. Treating trade secrets solely as a web of confidential arrangements means that the protection the law affords is not good against any third-party, who acquires the trade secret outside of some confidential arrangement. But that narrow definition would not prevent strangers from stealing information or from acquiring it from a person whom they knew had acquired the information by unlawful means.

In contrast to what Samuelson believes, the current law goes beyond the case of contractual breach so as to reach any individual who misappropriates the information,

⁸See generally Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575 (2002).

⁹See Pamela Samuelson, *Information as Property: Do Ruckleshaus and Carpenter Signal a Changing Direction in Intellectual Property Law*, 38 CATH. U. L. REV. 365, 366 (1989); Pamela Samuelson, *Privacy as Intellectual Property*, 52 STAN. L. REV. 1125, 1153 n.148 (2000) (noting Justice Holmes's opinion in *E. I. du Pont de Nemours Powder Co. v. Masland*, which observed: "Whether the plaintiffs have any valuable secret or not the defendant knows the facts, whatever they are, through a special confidence that he accepted. The property may be denied but the confidence cannot be. Therefore the starting point for the present matter is not property or due process of law, but that the defendant stood in confidential relations with the plaintiffs." (244 U.S. 100, 102 (1917)) [hereinafter Samuelson, *Privacy*].

including receiving it with knowledge that some prior person had misappropriated it.¹⁰ No one could acquire information lawfully from a person whom he knows has passed the information on in breach of a confidential arrangement. The only cases that seem to be excluded are those of “innocent acquisition,” as with the person who finds the recipe book at a train station after it was misplaced by its owner. But even in this last case, I see no reason why the owner of the trade secret (to beg the question) should not be allowed to enjoin the use of the information innocently acquired by a third-person before it has been disclosed to the public at large. The innocent converters of tangible property cannot keep what they have. Their only protection is a right to recoup for the value that they added to the property of the owner. The analogous remedy to the sort that is routinely imposed in voluntary transfers of trade secrets would be a return of any document that contains the trade secret coupled with an obligation not to use it in one’s own affairs.

Yet the difficulties here go further. To speak of a trade secret as though it emanates solely from a confidential arrangement puts the cart before the horse. There is no obvious reason why a single person cannot develop and keep a trade secret for himself. The fact that the information is not shared with a single soul does not strip it of legal protection. Rather the contrary seems to be true. It is precisely the right of an individual to keep that secret to himself that allows him to disclose it to other individuals under a condition of confidentiality. It would be odd to enforce any contract to keep the information confidential if the original holder or creator of the trade secret had no property rights in it at all. After all, we do not say that someone becomes the owner of property because he has leased it; rather the reverse is true: because he is the owner, he is normally in a position to lease the property. In virtue of the ability of individuals to both

¹⁰See Uniform Trade Secrets Act § 1(2) on misappropriation.

keep and transfer information, special rules must be made with respect to the further transfer of information received under a license or other confidential agreement. Although the usual rules of property and contract look askance as consensual restraints on alienation,¹¹ the presumptions are reversed in dealing with trade secrets: anyone who transfers the information to a third party may still keep it to himself. The greater the number of individuals who hold the trade secret, there is a greater risk of leakage and with it destruction. The optimal norm therefore is one against allowing the retransfer of information that has been obtained by license.¹² The point here is important not because it tells us whether to treat trade secrets as property or strictly as confidential arrangements. Rather, it is important because of the light that it sheds on the need to tailor standard legal principles to take into account the easy reproducibility of trade secret information.

II. PHYSICAL AND REGULATORY TAKINGS

The recognition that trade secrets count as property interests sets the stage for the analysis of the role of the takings clause with respect to this issue. The key case in this history is *Ruckelshaus v. Monsanto Co.*¹³ In this case, the government flat-out conceded that trade secrets were property under Missouri law when the matter came before the United States Supreme Court.¹⁴ The Court eventually held that trade secrets were property under Missouri law, and thus protected against confiscation under the takings clause of the constitution.¹⁵ The next question that arises is just what form does that protection take? An easy case is when the government engages in a forced assignment of a trade secret, the terms of which allow it to use the information in secret for its own

¹¹But see Richard A. Epstein, *Why Restrain Alienation?*, 85 COLUM. L. REV. 970 (1985).

¹²Samuelson, *Privacy*, *supra* note 9, at 1056-1057.

¹³467 U.S. 986 (1984).

¹⁴*Id.* at 1001.

¹⁵*Id.* at 1001-1003.

purposes, while forbidding the original holder of the trade secret and its licensees, if any, from making any further use of the trade secret on their own. The point of this illustration ties in closely to the Supreme Court's now-dominant (if incoherent) organization of takings law. The most obvious form of a taking is the occupation of tangible property, which is in general subject to a rule of virtual per se invalidity.¹⁶ The original owner loses possession of the thing, which is taken over by the government. If this outright transfer of ownership does not count as a taking, then the entire clause is useless and irrelevant.

In some cases, however, it has been argued that the high standard of judicial review associated with physical occupation of property does not carry over to the realm of intellectual property. After all, if the property is intellectual, then how can it be subject, almost by definition, no less, to physical occupation? The objection exalts literalism over functionalism. The entire point of the argument for per se compensation for physical occupation is that it condemns the behavior of the government, whether one looks at the issue from the benefit or the cost side. Thus, the individual property owner has certainly suffered a loss from the state's denial of its right to use the trade secret. But in some cases, most notably with good will, the Supreme Court has held that its destruction of the trade secret is not compensable because it does not represent any "property taken" by the government.¹⁷ Here of course the total prohibition on use counts as a loss that is matched in full by the public benefit from the state's using the trade secret for its own purposes, which is the precise analogy to physical occupation with tangible property. The major question that remains is whether the compensation in question

¹⁶See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982).

¹⁷See, e.g., *Kimball Laundry Co. v. United States*, 338 U.S. 1, 5 (1949) (using the "property taken" language from *Monongahela Navigation Co. v. United States* (148 U.S. 312, 325-326 (1893))). *But see* RICHARD A. EPSTEIN, IN AND OUT OF PUBLIC SOLUTION, IN *PROPERTY RIGHTS: COOPERATION, CONFLICT AND LAW* 307, 317-321 (Terry L. Anderson & Fred S. McChesney eds. (2003)).

should be measured by the gain to the government or the loss to the owner, for which the correct answer is the latter. If the value to the state is lower than it is to the owner, then the property should not be taken at all. And if it is greater, then the government can afford to make the compensation and come out the net winner. The underlying dynamics of how takings rules are used to constrain government behavior do not fall into abeyance in dealing with trade secrets. The per se rule of the physical occupation cases has its direct analog in the law of trade secrets.

The process of analogy can also be carried over to the next type of cases, in which the holder of a trade secret is allowed to continue to practice the secret himself, but loses the property right of exclusion. That residual right to use along with others is not wholly worthless. Parity is preferable to exclusion: it is better to be able to use the process even when others use it than it is to be barred from its use altogether. But it hardly follows that the reduction from a position of dominance to one of parity does not count as a loss, simply because state action could have reduced that position to one of absolute inferiority.

The cases of tangible property again provide a sensible guide to the overall situation. The key case is *Kaiser-Aetna v. United States*,¹⁸ where the Court held that the United States had committed a physical taking when it forced the builder of a private marina to allow open access to public waters to all individuals. The hallmark of property is found in the right to exclude, and this exclusion right was destroyed when state action turned the property from private to common. Here the residual rights of use of the original owner should reduce the damages allowable from this taking, but even though this was only a “partial” taking of sorts, it was a “complete” taking of the right to

¹⁸444 U.S. 164 (1979).

exclude. Thus, the obligation to compensate was determined under the virtual per se taking rules that are used in the cases of direct government occupation. One other way to look at this scenario is to hold that the government does not escape its obligation to compensate landowners simply because the benefit of state use is not confined to the government in its collective capacity, but works for the benefit of undifferentiated members of the public. The key test is whether other individuals are allowed to go where before they were prohibited. This line applies with equal force in the area of trade secrets, in which indeed the most common form of theft never eliminates the right of the owner to use his own trade secret.¹⁹

The two types of cases just considered must both be contrasted with various forms of government regulation in which the “sole”—a term that must be used with much trepidation—consequence of the government action is to restrict the use of the property in question, without involving any direct use of the property by the state. The paradigmatic illustration of this practice is in fact everyday zoning,²⁰ in which the public benefits from the land use restrictions on others come about indirectly. For example, lower congestion and more open space are both consequences of zoning. For these purposes, the key difference from the earlier cases derives from the Supreme Court’s decision in *Penn Central v. City of New York*, which subjects use restrictions on property to far lower standards of judicial review.²¹ The standard formulation indicates that so long as the regulated user retains some viable economic use of the property in question, he cannot complain of the loss of the right to use because he keeps many other “sticks” in the bundle of property rights. This formulation of the question is subject to two strong,

¹⁹See Uniform Trade Secrets Act § 1.

²⁰See *Euclid v. Ambler Realty Co.*, 272 U.S. 265 (1926).

²¹438 U.S. 105 (1978).

indeed insuperable, objections. The first asks how to define the tipping point that separates those restrictions of economic use that render property economically viable and those that do not. The second asks how to define what counts as “the property” to measure the loss in question. For example, if two adjacent plots are subject to common ownership, does the preservation of use rights on one justify their extinction on the other, and so on down the line.

Whether we like the distinction established in *Penn Central* or not, it becomes important to work within the established framework. If, therefore, all legislation that pertains to trade secrets is treated as use restrictions, the lower rational basis test that derives its power from the *Penn Central* case will be used in connection with every system of regulation that deviates in any particular manner from the common law rules (or their codifications) that govern the subject. But again that character is incorrect in dealing with these cases. A use restriction of a trade secret involves the situation in which the holder of the trade secret is told that it cannot practice it in some location or use it for some product lines. These situations count as use restrictions because the owner of the trade secret still remains the only person who can practice the secret, even if he can do so over a narrower range than before. The analogy is a precise equivalent to a decision to allow a landowner to use property only for residential purposes, which does not allow anyone else the use of the property in question. However, the aforementioned regulations that require turning over the information contained in a trade secret are the intangible equivalent of direct occupation.

The issue here is of great importance because of the way in which it shapes the attitudes to these comprehensive trade secret disclosure schemes. In *Monsanto*, for

example, the Court was asked to evaluate different iterations of a scheme found in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).²² It contained a non-problematic initial period when submitted information is not shared with a rival claimant, but which, once the period has expired, still authorizes the Environmental Protection Agency to use trade secret information that it has acquired from an earlier permit applicant to evaluate the safety of a product that is prepared by a subsequent applicant. The provision in question in the case was part of an elaborate statutory compromise about the kinds of uses that could be made of trade secret information for the purposes of dealing with health and safety. As such, it implicates the next three questions associated with the generalized takings inquiry, having to do with public use, police power justifications and just compensation. The first question deals with whether the taking is for a public use. In the present case, there is little doubt that the use of this information by government agencies to evaluate the products that are submitted by others counts as a public use of an intangible property right. Thus, the operation of the statute should not be enjoined, even if we back off the very broad, indeed grotesque, view that finds a public use whenever there is any “conceivable” public benefit from certain forms of government actions.²³ It takes no master of analogy to see that testing for environmental impacts differs from forcing a Hawaiian landlord to sell his reversionary interest to a sitting tenant for a price that is stipulated by the state, even if the Supreme Court unwisely held the latter a taking for public use.

²²61 Stat. 163 (1947) (codified as amended at 7 U. S. C. § 136).

²³See *Hawaiian Housing Authority v. Midkiff*, 467 U.S. 229 (1984). It is instructive to note the differences in nuance between *Monsanto* and *Midkiff*, two cases that were decided in the same term of the Supreme Court.

Even after the public use issue has been decided, there is still the question of whether the taking passes muster because the government has provided suitable compensation in cash or kind. Under FIFRA a number of options were available to the EPA with respect to the information requested. In principle it could disclose that information to the public, even though in practice it did not adopt this particular option. It could surely take the information in question and give it to a rival claimant in order to reduce the time and cost needed to process its application. The statute itself contained certain requirements for compensation with respect to the shared use of that information, so that the basic pattern of the takings clause is respected in dealing with the matter. At this point, the only real question is whether the amount of compensation meets the usual tests, which, insofar as they ignore loss of good will and consequential damages, are far too favorable to the government.

What is troublesome about the present situation is the unargued assumption in *Monsanto* that the government program should be evaluated in terms of the lower standards of review that are applicable for a regulatory taking. At this point, the inquiry slips into an “ad hoc” discussion of the *Penn Central* test with its three major components: “the character of the governmental action, its economic impact, and its interference with reasonable investment-backed expectations.”²⁴ These three dubious components do not advance the analysis of any takings question. The first is most uninformative because it does not explain why different treatments ought to be attached in the end to coercive government behavior. Coercive government behavior is the same no matter what form it takes. The second is seemingly irrelevant because it does not

²⁴*Monsanto*, 467 U.S. at 1005.

explain why the size of the impact goes to the question of coverage under the takings clause, rather than the valuation of an individual case.

The last requirement, that there be “reasonable investment-backed expectations,” is at best useless and at worst mischievous. If the question is whether individuals have a reasonable expectation that their property will be taken by government action, then the answer depends on how one deals with reasonableness. If the question is only *predictive*, namely, whether individuals and firms rightly fear that governments will act in disrespect of common law property rights, then the worse that government behaves, the stronger its defenses against constitutional challenges. Yet no one accepts that argument with respect to cases of outright government occupation: why then should it be decisive, in the wrong way, with respect to regulations? The Constitution is a tool to restrain government power, not a device for forcing private parties to mitigate at their own expense the losses from government misconduct. Individuals who are warned by prior forms of government misbehavior must, as they can, steer clear of those actions that provoke the wrath of the state. The difficulty with this point of view is that it requires Hobbesian responses to what is supposed to be a Lockean world. The private action to mitigate damages is not what is required because it will reduce the levels of innovation and invention that allow the system to operate successfully in the first place. It seems therefore that more than predictive weight has to be attached to the idea of “reasonableness” under the circumstances. This interpretation, in turn, requires some sense that the arrangements in question respond to some legitimate government purposes that are, at a minimum, justified by more than a crude appeal to the notion that “we trap you inside the jungle and therefore can expropriate all that you own.”

The differences in these two points of view are of great importance. Under the second, normative account of these tests, we do have a police power justification for running examinations to see that the chemicals in question meet the standards of public health and safety. But we can surely achieve this particular goal without the publication of the content of the trade secret and without allowing subsequent applicants to use the information free of charge. The information that is required is delivered under a pledge of constitutionality that insulates it from constitutional reproach. Stated otherwise, the police power requires not only the articulation of an intelligent end, but also the selection of means that fit the end in question. So long as the health and safety objectives can be met without compromising the content of the trade secret, the statute must choose means that satisfy the dual imperatives of protecting both private property and public health. It follows, therefore, that there is a clear restriction on how the government agency may use the trade secret information entrusted in its care. That information may be used to facilitate review of the application of the firm that held the trade secret without any compensation at all. However, beyond that there are difficulties that rightly require compensation. The publication of the information willy-nilly does not advance the health and safety in any particular way that could not be achieved by warnings of those dangers that might be encountered in ordinary use. In addition, any gains that could be obtained by allowing second-generation firms to use this information can be obtained even if they are required to compensate the first-mover for the partial loss of its trade secret. Further, this market setting ensures Pareto efficiency because the second generation firm will not pay for the information unless he values it more than the price, and the first-mover will only give it if he values the price more than the cost of secret diffusion. The language

about “reasonable investment-backed expectations” is therefore redundant and circular to the extent that it purports to do anything more than refer courts back to the four key questions that animate any inquiry under the takings law.

Yet the Court’s analysis has not followed this interpretation. Rather, once the *Penn Central* test erroneously was assumed to apply, the entire inquiry shifted from government justification to assumption of risk by the holder of the trade secret. Thus, Justice Blackmun first observed that “Monsanto was on notice of the manner in which the EPA was authorized to use and disclose any data turned over to it by an applicant for registration.”²⁵ The clear inference is that by virtue of the fact that it had the ability to keep the information from the government, the holder necessarily assumed the risk of its partial or total disclosure once it handed that information over to the government. “If, despite the data-consideration and data-disclosure provisions in the statute, Monsanto chose to submit the requisite data in order to receive a registration, it can hardly argue that its reasonable investment-backed expectations are disturbed when the EPA acts to use or disclose the data in a manner that was authorized by law at the time of the submission.”²⁶ After all, it could still sell its products in some overseas markets (unless it were subject to the same adverse conditions.)

At this point Justice Blackmun’s entire analysis breaks down because of the on/off character of investment-backed expectations. Let the submission be made before the requirement is imposed, and it looks as though there is no justification for the restriction in question. But once there is notice in advance of what will be required, then there is an “overwhelming” case against the protection of the trade secret because the

²⁵*Id.* at 1006.

²⁶*Id.* at 1006–1007.

expectation of privacy utterly vanishes. The point here is that the voluntary submission is said to undo the property protection, which in turn leads to the question of why the decision to submit the data is called voluntary. In the ordinary case a decision is voluntary because the party who makes it can decline to do so without the loss of any other rights. But this regulatory scheme is not part of an ordinary bargain between equal strangers from which Monsanto could walk away at its free will and pleasure. At common law Monsanto would have the antecedent right to market its products without the need for any preclearance from the government, subject to the usual rules that deal with damages and injunctions in the event that its fungicides prove dangerous to others. In the present system, the statute deprives them of that marketing right prior to the time of any submission, without any compensation being paid at all. If that baseline had been properly obtained, then the language of mutual gain would justify the use of the assumption of risk theme implicit in the phrase “reasonable investment-backed expectations.” But it was improperly obtained, for the government cannot just tell people that they cannot receive a permit. The permit power does not give it implicit ownership rights over the private property, but this power must be exercised only for some good cause, which needs to be illustrated. If this were not the case, the government could announce to one and all that no one could do anything without a permit, be it occupy land, sell products or protest some regulatory scheme. At that point the state could pay in funny money, by offering to return to private persons the rights that it had just obtained by fiat in exchange for some fresh concession. Thus, the government could demand that if you wish to build a house on beachfront property, then you must yield to the

government an easement across the front of the property—²⁷or for that matter, half the land in question.

It seems clear that the entire case must raise the vexing doctrine of “unconstitutional conditions,” which places limits on the ability of the government to require individuals to waive their constitutional rights, including those to property under the takings clause,²⁸ in order to escape the burden of some regulatory exaction. Justice Blackmun blithely notes the possibility that this doctrine could apply, but quickly concludes that it really does not matter in this case because the entire issue concerns health and safety over which the government power to regulate is secure. Therefore, he never asks the question of whether the unconstitutional conditions doctrine imposes any limitation on the strength of the quid pro quo the government can exact in connection with basic regulation. He thus downplays the critical role that the compensation system and the sharp restrictions on public and private disclosure played in the evaluation of FIFRA. Quite simply, the decision refuses to acknowledge the *narrower* grounds on which it is both possible and proper to uphold FIFRA. Rather, Blackmun makes the clever observation that the statutory conditions were not that onerous because Monsanto continued to invest in research after FIFRA and its various modifications were on the books. However, that result did not occur because the government could always have its way on matters of environmental regulation so long as it gives public notice of its intention. Instead, it is because FIFRA contained both compensation and confidentiality requirements that satisfied the more exacting tests of just compensation and police power justification.

²⁷See *Nollan v. South Carolina Coastal Comm’n*, 483 U.S. 825 (1987).

²⁸See RICHARD A. EPSTEIN, *BARGAINING WITH THE STATE* (1993).

The confusion that was sowed in Monsanto came to a head in the endless litigation, in which I took part as a consultant for the tobacco companies, that took place in the First Circuit²⁹ over the constitutionality of Massachusetts 307B.³⁰ This statute required that certain key ingredients in tobacco (other than the tobacco itself) be disclosed to the department of public health in order of their relative concentrations. The DPH could be released generally “for the purpose of protecting public health,” so long as the Attorney General did not think that the public disclosure of the trade secret information exposed the state to liabilities under the takings clause.

The statute itself does not ostensibly require any holder of a trade secret to expose all the flavorings added to their cigarettes, or to explain how the ingredients are combined. However, the published information unequivocally makes it easier for a competitor to reverse engineer the distinctive taste of any cigarette, a task that is

²⁹See *Philip Morris, Inc. v. Harshbarger*, 122 F.3d 58 (1st Cir. 1997); *Philip Morris, Inc. v. Harshbarger*, 159 F.3d 670 (1st Cir. 1998); *Phillip Morris, Inc. v. Reilly*, 113 F. Supp. 2d 129 (D. Mass. 2000). See also *Philip Morris, Inc. v. Reilly*, 312 F.3d 24 (1st Cir. 2002)

³⁰§ 307B. Manufacture of tobacco products; annual reports including added constituents and nicotine yield ratings; disclosure; exclusions

For the purpose of protecting the public health, any manufacturer of cigarettes, snuff or chewing tobacco sold in the commonwealth shall provide the department of public health with an annual report, in a form and at a time specified by that department, which lists for each brand of such product sold the following information:

(a) The identity of any added constituent other than tobacco, water or reconstituted tobacco sheet made wholly from tobacco, to be listed in descending order according to weight, measure, or numerical count; and

(b) The nicotine yield ratings, which shall accurately predict nicotine intake for average consumers, based on standards to be established by the department of public health.

The nicotine yield ratings so provided, and any other such information in the annual reports with respect to which the department determines that there is a reasonable scientific basis for concluding that the availability of such information could reduce risks to public health, shall be public records; provided, however, that before any public disclosure of such information the department shall request the advice of the attorney general whether such disclosure would constitute an unconstitutional taking of property, and shall not disclose such information unless and until the attorney general advises that such disclosure would not constitute an unconstitutional taking.

This section shall not require a manufacturer, in its report to the department or otherwise, to identify or disclose the specific amount of any ingredient that has been approved by the Food and Drug Administration, Public Health Service, United States Department of Health and Human Services ("FDA"), or its successor agency, as safe when burned and inhaled or that has been designated by the FDA, or its successor agency, as generally recognized as safe when burned and inhaled, according to the Generally Recognized As Safe list of the FDA.

exceedingly difficult to undertake without that information because the act of burning the tobacco often destroys or transforms its initial ingredients. No one denied the characterization of the disclosures as a partial taking of the initial trade secret that falls into the pattern established in *Kaiser-Aetna*. The point hardly counts as news in light of the explicit statutory provision that blocks disclosure “unless and until the attorney general advises that such disclosure would not constitute an unconstitutional taking.”

The next question that arises is how best to deal with the statute in question once the prima facie case has been established. The right way to think about the issue is to note that the submission of information should not be regarded as “voluntary” in that the price that is paid for the failure to conform to the new law is the loss of any ability to sell the property within Massachusetts. The case, therefore, becomes one in which the ability to avoid one obligation only comes with the sacrifice of a related constitutional right. In one sense, the case is no different to the tobacco companies than a law that sets forth that if they wish to sell their products within the state of Massachusetts, they must deed over the title to their Boston headquarters to the state. In dealing with the prima facie case, it does not matter what form of property is surrendered. All exactions of this sort force a person to choose between two entitlements, similar to the robber who gives his hapless victim the choice between his money and his life.

In response, Massachusetts should forcefully disagree with the analogy on the ground that its statute is justified by the police power in the name of public health in a way in which a seizure of the Boston headquarters is not. However, that conclusion only works if one takes (as Justice Blackmun implied in *Monsanto*) a rational basis view (if one can call it that) of the police power under which a mere whiff of a public health

interest is sufficient to insulate the statute from all forms of additional review. But any sensible regime of takings law cannot allow a constitutional protection created at the front end to be eviscerated at the back end, without at least some look at the methods chosen to pursue the public health. Here the differences between FIFRA and the Massachusetts scheme are simply too large to be ignored.³¹ The targets of the Massachusetts statute were such potent additives as parsley sage, rosemary and thyme, or at least “sugars, glycerin, propylene glycol, cocoa, and licorice.”³² All of these elements are common in all sorts of common food (and one assumes pharmaceutical) preparations, in which their use goes without notice. There was no showing, or even suggestion, that the presence of these elements in tobacco posed a greater threat than they did in other contexts. Yet the statute does not purport to regulate their use in any other product. Nor for that matter is there any showing that a consumer who is constantly bombarded with information about the dangers of nicotine and tar, all of which are fully disclosed and discussed, could attach any but the most evanescent interest in the ingredients for which disclosure is routinely required under the statute. The inference in this case is inescapable that the information in question is of value to only one segment of the public, namely, rival producers. These rivals would be able to combine this information with that available from other sources to reverse engineer trade secrets on flavorings in which the tobacco companies have invested millions, and for which they take incredible precautions to keep them from falling into enemy hands. Moreover, the entire disclosure was far beyond that provided under both the federal statute and under the statutes of other states. In these statutes, the information in question was collected in confidence by the

³¹*Cf.* Robert K. Hur, *Takings, Trade Secrets, and Tobacco: Mountain or Molehill?*, 53 STAN. L. REV. 447, 473–474 (2000) (noting the less restrictive alternatives available).

³²*Philip Morris, Inc. v. Reilly*, 312 F.3d 24, 27 (1st Cir. 2002).

government agency unless and until some investigation revealed that it posed some danger to public health, at which point the firm could either redesign the product or face publication of the offending result.³³ The traditional account of the police power is broad enough to include regulatory schemes that are intended for the protection of the “health, safety, morals and general welfare.” Even in the heyday of substantive due process, the scope of the police power was regarded as strong enough to require the publication of trade secret information that was necessary to prevent various forms of consumer fraud.³⁴ But the traditional formulation of the police power was intended to exclude those statutes that had primarily an anticompetitive effect, as by providing one class of firms an advantage that it denied to its rivals. In these cases, the simple incantation that the disclosures are for public health cannot save a statute that yields its secrets under the most cursory of reviews.

In dealing with this situation, a badly split First Circuit came to the right decision when the two judges who struck down the statute were in fundamental disagreement on how to apply the *Monsanto* decision. Judge Torruella took the view that the three-part test from *Penn Central* applied. He concluded that the decisive feature was that the impact of the government regulation was severe because of the destruction of the trade secret, while its health justification was weak. The basic conclusion is correct, largely because it downplays the notice and assumption of risk rationales in *Monsanto* that would lead to the opposite conclusion.

Judge Selya disagreed, and believed that the reasonable investment-backed

³³MINN. STAT. § 461.17 (1997) (covering only certain specified additives). TEX. HEALTH & SAFETY §§ 161.351-55 (2001) (requiring the report of brand-specific ingredients in descending order, but banning disclosure for information that counts as trade secrets under federal law).

³⁴Corn Products Refining Co. v. Eddy, 249 U.S. 427, 431-32 (1919).

expectations should trump. He found in *Monsanto* clear intimations that the dominant factor in the case related not to the nature of the state imposition, but to the clear sense that this decision dashed the reasonable expectations of the tobacco firms because it was imposed after their products reached the market. In so doing he relied on Justice Blackmun's observation in *Monsanto* that "we find that the force of this factor is so overwhelming" that it is not necessary to consider either the nature of the private interest or the type of government intervention. That said, he then inexplicitly, appears to ignore the rest of the sentence that provides "at least with respect to certain of the data submitted by Monsanto to the EPA, that it disposes of the taking question regarding those data." The clear implication of Justice Blackmun's logic was that the prior notice in this case doomed the claim for protected status. But that assertion does not support the converse proposition that if notice is lacking, the regulation in question has to fail regardless of other circumstances. This rapid oscillation between the on/off switches leaves open the possibility that the regulation might be per se valid when applied to some new product or reformulated version of existing products, which took place after the statute was on the books.

III. CONCLUSION

In dealing with these issues, there is, yet again, abundant support for two key propositions. First, it is a mistake in dealing with intellectual property questions to assume that the differences between intellectual property and tangible property are invariably so broad that it is necessary to start over whenever any serious question of intellectual property law arises. In this case there are some differences between trade secrets and tangible property in the articulation of the right to exclude, but none of these

bear any relevance to the overall analysis of the two cases. Second, in dealing with this issue the takings law remains a mess for two reasons. One applies generally to all types of property, and the other pertains exclusively to intellectual property law. The general problem with takings law is the large gulf in the rules that govern physical and regulatory takings. It is not possible to draw any principled line between these types of takings that justifies the use of strict scrutiny in the former case and rational basis test in the latter.

The specific problem with takings law applied to intellectual property is that, in dealing with trade secrets, the flawed treatment of regulatory takings articulated in *Penn Central* is the only framework that is relevant. Once the decision is made to analogize to the distinction between occupations and use restrictions in the physical takings context, it becomes clear that this case should be treated on a par with the former and not the latter, even though both FIFRA and the Massachusetts statutes are undoubtedly types of regulation. A simple use restriction of a trade secret only prevents its holder from using it in certain products or processes, but it does not require that a party share the information with others. This coerced sharing in the world of intellectual property is similar to an occupation of property by others in the world of real property. In making this claim, it would be unwise to argue that the stricter standard applied to occupation cases should block any police power justification that the government might offer. But it does require that these justifications be tested and not accepted on face value.

It is easy to pooh-pooh this case as making a mountain out of a mole-hill, as at least one student author has done.³⁵ The stakes in getting the right analysis on this matter are high, for the much despised tobacco industry is not the only potential target of trade secret regulation. Similar rules with a health and safety rationale could be imposed on pharmaceuticals, foodstuffs, or indeed any other consumer product. It is a credit to our political institutions that they have as of yet not

³⁵See Hur, *supra* note 30.

attempted such efforts, but with the manifest hostility toward the pharmaceutical industry, an approach such as this might well be in the wings. The thesis here is that there is no reason to run that risk at all. The procedures whereby trade secrets are disclosed to regulators under a promise of confidentiality unless or until some danger is discovered imitates a set of practices that are routinely used with the voluntary transferring and licensing of trade secrets. It falls easily within the scope of the police power even if we do engage in the usual gymnastics that surround takings jurisprudence. However, when the government can give the trade secrets away on a whim, constitutional problems arise. There is still time to place the protection of trade secrets on a more secure constitutional footing, and do away with the erroneous intellectual property analysis that flies under the false flag of the *Penn Central* case.

Readers with comments should address them to:

Richard A. Epstein
University of Chicago Law School
1111 East 60th Street
Chicago, IL 60637
repstein@uchicago.edu

Chicago Working Papers in Law and Economics
(Second Series)

1. William M. Landes, Copyright Protection of Letters, Diaries and Other Unpublished Works: An Economic Approach (July 1991)
2. Richard A. Epstein, The Path to *The T. J. Hooper*: The Theory and History of Custom in the Law of Tort (August 1991)
3. Cass R. Sunstein, On Property and Constitutionalism (September 1991)
4. Richard A. Posner, Blackmail, Privacy, and Freedom of Contract (February 1992)
5. Randal C. Picker, Security Interests, Misbehavior, and Common Pools (February 1992)
6. Tomas J. Philipson & Richard A. Posner, Optimal Regulation of AIDS (April 1992)
7. Douglas G. Baird, Revisiting Auctions in Chapter 11 (April 1992)
8. William M. Landes, Sequential versus Unitary Trials: An Economic Analysis (July 1992)
9. William M. Landes & Richard A. Posner, The Influence of Economics on Law: A Quantitative Study (August 1992)
10. Alan O. Sykes, The Welfare Economics of Immigration Law: A Theoretical Survey With An Analysis of U.S. Policy (September 1992)
11. Douglas G. Baird, 1992 Katz Lecture: Reconstructing Contracts (November 1992)
12. Gary S. Becker, The Economic Way of Looking at Life (January 1993)
13. J. Mark Ramseyer, Credibly Committing to Efficiency Wages: Cotton Spinning Cartels in Imperial Japan (March 1993)
14. Cass R. Sunstein, Endogenous Preferences, Environmental Law (April 1993)
15. Richard A. Posner, What Do Judges and Justices Maximize? (The Same Thing Everyone Else Does) (April 1993)
16. Lucian Arye Bebchuk and Randal C. Picker, Bankruptcy Rules, Managerial Entrenchment, and Firm-Specific Human Capital (August 1993)
17. J. Mark Ramseyer, Explicit Reasons for Implicit Contracts: The Legal Logic to the Japanese Main Bank System (August 1993)
18. William M. Landes and Richard A. Posner, The Economics of Anticipatory Adjudication (September 1993)
19. Kenneth W. Dam, The Economic Underpinnings of Patent Law (September 1993)
20. Alan O. Sykes, An Introduction to Regression Analysis (October 1993)
21. Richard A. Epstein, The Ubiquity of the Benefit Principle (March 1994)
22. Randal C. Picker, An Introduction to Game Theory and the Law (June 1994)
23. William M. Landes, Counterclaims: An Economic Analysis (June 1994)
24. J. Mark Ramseyer, The Market for Children: Evidence from Early Modern Japan (August 1994)
25. Robert H. Gertner and Geoffrey P. Miller, Settlement Escrows (August 1994)
26. Kenneth W. Dam, Some Economic Considerations in the Intellectual Property Protection of Software (August 1994)
27. Cass R. Sunstein, Rules and Rulelessness, (October 1994)

28. David Friedman, More Justice for Less Money: A Step Beyond *Cimino* (December 1994)
29. Daniel Shaviro, Budget Deficits and the Intergenerational Distribution of Lifetime Consumption (January 1995)
30. Douglas G. Baird, The Law and Economics of Contract Damages (February 1995)
31. Daniel Kessler, Thomas Meites, and Geoffrey P. Miller, Explaining Deviations from the Fifty Percent Rule: A Multimodal Approach to the Selection of Cases for Litigation (March 1995)
32. Geoffrey P. Miller, Das Kapital: Solvency Regulation of the American Business Enterprise (April 1995)
33. Richard Craswell, Freedom of Contract (August 1995)
34. J. Mark Ramseyer, Public Choice (November 1995)
35. Kenneth W. Dam, Intellectual Property in an Age of Software and Biotechnology (November 1995)
36. Cass R. Sunstein, Social Norms and Social Roles (January 1996)
37. J. Mark Ramseyer and Eric B. Rasmusen, Judicial Independence in Civil Law Regimes: Econometrics from Japan (January 1996)
38. Richard A. Epstein, Transaction Costs and Property Rights: Or Do Good Fences Make Good Neighbors? (March 1996)
39. Cass R. Sunstein, The Cost-Benefit State (May 1996)
40. William M. Landes and Richard A. Posner, The Economics of Legal Disputes Over the Ownership of Works of Art and Other Collectibles (July 1996)
41. John R. Lott, Jr. and David B. Mustard, Crime, Deterrence, and Right-to-Carry Concealed Handguns (August 1996)
42. Cass R. Sunstein, Health-Health Tradeoffs (September 1996)
43. G. Baird, The Hidden Virtues of Chapter 11: An Overview of the Law and Economics of Financially Distressed Firms (March 1997)
44. Richard A. Posner, Community, Wealth, and Equality (March 1997)
45. William M. Landes, The Art of Law and Economics: An Autobiographical Essay (March 1997)
46. Cass R. Sunstein, Behavioral Analysis of Law (April 1997)
47. John R. Lott, Jr. and Kermit Daniel, Term Limits and Electoral Competitiveness: Evidence from California's State Legislative Races (May 1997)
48. Randal C. Picker, Simple Games in a Complex World: A Generative Approach to the Adoption of Norms (June 1997)
49. Richard A. Epstein, Contracts Small and Contracts Large: Contract Law through the Lens of Laissez-Faire (August 1997)
50. Cass R. Sunstein, Daniel Kahneman, and David Schkade, Assessing Punitive Damages (with Notes on Cognition and Valuation in Law) (December 1997)
51. William M. Landes, Lawrence Lessig, and Michael E. Solimine, Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges (January 1998)
52. John R. Lott, Jr., A Simple Explanation for Why Campaign Expenditures are Increasing: The Government is Getting Bigger (February 1998)

53. Richard A. Posner, *Values and Consequences: An Introduction to Economic Analysis of Law* (March 1998)
54. Denise DiPasquale and Edward L. Glaeser, *Incentives and Social Capital: Are Homeowners Better Citizens?* (April 1998)
55. Christine Jolls, Cass R. Sunstein, and Richard Thaler, *A Behavioral Approach to Law and Economics* (May 1998)
56. John R. Lott, Jr., *Does a Helping Hand Put Others At Risk?: Affirmative Action, Police Departments, and Crime* (May 1998)
57. Cass R. Sunstein and Edna Ullmann-Margalit, *Second-Order Decisions* (June 1998)
58. Jonathan M. Karpoff and John R. Lott, Jr., *Punitive Damages: Their Determinants, Effects on Firm Value, and the Impact of Supreme Court and Congressional Attempts to Limit Awards* (July 1998)
59. Kenneth W. Dam, *Self-Help in the Digital Jungle* (August 1998)
60. John R. Lott, Jr., *How Dramatically Did Women's Suffrage Change the Size and Scope of Government?* (September 1998)
61. Kevin A. Kordana and Eric A. Posner, *A Positive Theory of Chapter 11* (October 1998)
62. David A. Weisbach, *Line Drawing, Doctrine, and Efficiency in the Tax Law* (November 1998)
63. Jack L. Goldsmith and Eric A. Posner, *A Theory of Customary International Law* (November 1998)
64. John R. Lott, Jr., *Public Schooling, Indoctrination, and Totalitarianism* (December 1998)
65. Cass R. Sunstein, *Private Broadcasters and the Public Interest: Notes Toward A "Third Way"* (January 1999)
66. Richard A. Posner, *An Economic Approach to the Law of Evidence* (February 1999)
67. Yannis Bakos, Erik Brynjolfsson, Douglas Lichtman, *Shared Information Goods* (February 1999)
68. Kenneth W. Dam, *Intellectual Property and the Academic Enterprise* (February 1999)
69. Gertrud M. Fremling and Richard A. Posner, *Status Signaling and the Law, with Particular Application to Sexual Harassment* (March 1999)
70. Cass R. Sunstein, *Must Formalism Be Defended Empirically?* (March 1999)
71. Jonathan M. Karpoff, John R. Lott, Jr., and Graeme Rankine, *Environmental Violations, Legal Penalties, and Reputation Costs* (March 1999)
72. Matthew D. Adler and Eric A. Posner, *Rethinking Cost-Benefit Analysis* (April 1999)
73. John R. Lott, Jr. and William M. Landes, *Multiple Victim Public Shooting, Bombings, and Right-to-Carry Concealed Handgun Laws: Contrasting Private and Public Law Enforcement* (April 1999)

74. Lisa Bernstein, *The Questionable Empirical Basis of Article 2's Incorporation Strategy: A Preliminary Study* (May 1999)
75. Richard A. Epstein, *Deconstructing Privacy: and Putting It Back Together Again* (May 1999)
76. William M. Landes, *Winning the Art Lottery: The Economic Returns to the Ganz Collection* (May 1999)
77. Cass R. Sunstein, David Schkade, and Daniel Kahneman, *Do People Want Optimal Deterrence?* (June 1999)
78. Tomas J. Philipson and Richard A. Posner, *The Long-Run Growth in Obesity as a Function of Technological Change* (June 1999)
79. David A. Weisbach, *Ironing Out the Flat Tax* (August 1999)
80. Eric A. Posner, *A Theory of Contract Law under Conditions of Radical Judicial Error* (August 1999)
81. David Schkade, Cass R. Sunstein, and Daniel Kahneman, *Are Juries Less Erratic than Individuals? Deliberation, Polarization, and Punitive Damages* (September 1999)
82. Cass R. Sunstein, *Nondelegation Canons* (September 1999)
83. Richard A. Posner, *The Theory and Practice of Citations Analysis, with Special Reference to Law and Economics* (September 1999)
84. Randal C. Picker, *Regulating Network Industries: A Look at Intel* (October 1999)
85. Cass R. Sunstein, *Cognition and Cost-Benefit Analysis* (October 1999)
86. Douglas G. Baird and Edward R. Morrison, *Optimal Timing and Legal Decisionmaking: The Case of the Liquidation Decision in Bankruptcy* (October 1999)
87. Gertrud M. Fremling and Richard A. Posner, *Market Signaling of Personal Characteristics* (November 1999)
88. Matthew D. Adler and Eric A. Posner, *Implementing Cost-Benefit Analysis When Preferences Are Distorted* (November 1999)
89. Richard A. Posner, *Orwell versus Huxley: Economics, Technology, Privacy, and Satire* (November 1999)
90. David A. Weisbach, *Should the Tax Law Require Current Accrual of Interest on Derivative Financial Instruments?* (December 1999)
91. Cass R. Sunstein, *The Law of Group Polarization* (December 1999)
92. Eric A. Posner, *Agency Models in Law and Economics* (January 2000)
93. Karen Eggleston, Eric A. Posner, and Richard Zeckhauser, *Simplicity and Complexity in Contracts* (January 2000)
94. Douglas G. Baird and Robert K. Rasmussen, *Boyd's Legacy and Blackstone's Ghost* (February 2000)
95. David Schkade, Cass R. Sunstein, Daniel Kahneman, *Deliberating about Dollars: The Severity Shift* (February 2000)
96. Richard A. Posner and Eric B. Rasmusen, *Creating and Enforcing Norms, with Special Reference to Sanctions* (March 2000)

97. Douglas Lichtman, Property Rights in Emerging Platform Technologies (April 2000)
98. Cass R. Sunstein and Edna Ullmann-Margalit, Solidarity in Consumption (May 2000)
99. David A. Weisbach, An Economic Analysis of Anti-Tax Avoidance Laws (May 2000, revised May 2002)
100. Cass R. Sunstein, Human Behavior and the Law of Work (June 2000)
101. William M. Landes and Richard A. Posner, Harmless Error (June 2000)
102. Robert H. Frank and Cass R. Sunstein, Cost-Benefit Analysis and Relative Position (August 2000)
103. Eric A. Posner, Law and the Emotions (September 2000)
104. Cass R. Sunstein, Cost-Benefit Default Principles (October 2000)
105. Jack Goldsmith and Alan Sykes, The Dormant Commerce Clause and the Internet (November 2000)
106. Richard A. Posner, Antitrust in the New Economy (November 2000)
107. Douglas Lichtman, Scott Baker, and Kate Kraus, Strategic Disclosure in the Patent System (November 2000)
108. Jack L. Goldsmith and Eric A. Posner, Moral and Legal Rhetoric in International Relations: A Rational Choice Perspective (November 2000)
109. William Meadow and Cass R. Sunstein, Statistics, Not Experts (December 2000)
110. Saul Levmore, Conjunction and Aggregation (December 2000)
111. Saul Levmore, Puzzling Stock Options and Compensation Norms (December 2000)
112. Richard A. Epstein and Alan O. Sykes, The Assault on Managed Care: Vicarious Liability, Class Actions and the Patient's Bill of Rights (December 2000)
113. William M. Landes, Copyright, Borrowed Images and Appropriation Art: An Economic Approach (December 2000)
114. Cass R. Sunstein, Switching the Default Rule (January 2001)
115. George G. Triantis, Financial Contract Design in the World of Venture Capital (January 2001)
116. Jack Goldsmith, Statutory Foreign Affairs Preemption (February 2001)
117. Richard Hynes and Eric A. Posner, The Law and Economics of Consumer Finance (February 2001)
118. Cass R. Sunstein, Academic Fads and Fashions (with Special Reference to Law) (March 2001)
119. Eric A. Posner, Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective (April 2001)
120. Douglas G. Baird, Does Bogart Still Get Scale? Rights of Publicity in the Digital Age (April 2001)
121. Douglas G. Baird and Robert K. Rasmussen, Control Rights, Priority Rights and the Conceptual Foundations of Corporate Reorganization (April 2001)
122. David A. Weisbach, Ten Truths about Tax Shelters (May 2001)

123. William M. Landes, What Has the Visual Arts Rights Act of 1990 Accomplished? (May 2001)
124. Cass R. Sunstein, Social and Economic Rights? Lessons from South Africa (May 2001)
125. Christopher Avery, Christine Jolls, Richard A. Posner, and Alvin E. Roth, The Market for Federal Judicial Law Clerks (June 2001)
126. Douglas G. Baird and Edward R. Morrison, Bankruptcy Decision Making (June 2001)
127. Cass R. Sunstein, Regulating Risks after ATA (June 2001)
128. Cass R. Sunstein, The Laws of Fear (June 2001)
129. Richard A. Epstein, In and Out of Public Solution: The Hidden Perils of Property Transfer (July 2001)
130. Randal C. Picker, Pursuing a Remedy in *Microsoft*: The Declining Need for Centralized Coordination in a Networked World (July 2001)
131. Cass R. Sunstein, Daniel Kahneman, David Schkade, and Ilana Ritov, Predictably Incoherent Judgments (July 2001)
132. Eric A. Posner, Courts Should Not Enforce Government Contracts (August 2001)
133. Lisa Bernstein, Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions (August 2001)
134. Richard A. Epstein, The Allocation of the Commons: Parking and Stopping on the Commons (August 2001)
135. Cass R. Sunstein, The Arithmetic of Arsenic (September 2001)
136. Eric A. Posner, Richard Hynes, and Anup Malani, The Political Economy of Property Exemption Laws (September 2001)
137. Eric A. Posner and George G. Triantis, Covenants Not to Compete from an Incomplete Contracts Perspective (September 2001)
138. Cass R. Sunstein, Probability Neglect: Emptions, Worst Cases, and Law (November 2001)
139. Randall S. Kroszner and Philip E. Strahan, Throwing Good Money after Bad? Board Connections and Conflicts in Bank Lending (December 2001)
140. Alan O. Sykes, TRIPs, Pharmaceuticals, Developing Countries, and the Doha "Solution" (February 2002)
141. Edna Ullmann-Margalit and Cass R. Sunstein, Inequality and Indignation (February 2002)
142. Daniel N. Shaviro and David A. Weisbach, The Fifth Circuit Gets It Wrong in *Compaq v. Commissioner* (February 2002) (Published in *Tax Notes*, January 28, 2002)
143. Warren F. Schwartz and Alan O. Sykes, The Economic Structure of Renegotiation and Dispute Resolution in the WTO/GATT System (March 2002, *Journal of Legal Studies* 2002)
144. Richard A. Epstein, HIPAA on Privacy: Its Unintended and Intended Consequences (March 2002, forthcoming *Cato Journal*, summer 2002)

145. David A. Weisbach, Thinking Outside the Little Boxes (March 2002, *Texas Law Review*)
146. Eric A. Posner, Economic Analysis of Contract Law after Three Decades: Success or Failure (March 2002)
147. Randal C. Picker, Copyright as Entry Policy: The Case of Digital Distribution (April 2002, *The Antitrust Bulletin*)
148. David A. Weisbach, Taxes and Torts in the Redistribution of Income (April 2002, Coase Lecture February 2002)
149. Cass R. Sunstein, Beyond the Precautionary Principle (April 2002)
150. Robert W. Hahn and Cass R. Sunstein, A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis (April 2002)
151. Douglas Lichtman, Copyright as a Rule of Evidence (May 2002, updated January 2003)
152. Richard A. Epstein, Steady the Course: Property Rights in Genetic Material (May 2002)
153. Jack Goldsmith and Cass R. Sunstein, Military Tribunals and Legal Culture: What a Difference Sixty Years Makes (June 2002)
154. William M. Landes and Richard A. Posner, Indefinitely Renewable Copyright (July 2002)
155. Anne Gron and Alan O. Sykes, Terrorism and Insurance Markets: A Role for the Government as Insurer? (July 2002)
156. Cass R. Sunstein and Adrian Vermeule, Interpretation and Institutions (July 2002)
157. Cass R. Sunstein, The Rights of Animals: A Very Short Primer (August 2002)
158. Cass R. Sunstein, Avoiding Absurdity? A New Canon in Regulatory Law (with Notes on Interpretive Theory) (August 2002)
159. Randal C. Picker, From Edison to the Broadcast Flag: Mechanisms of Consent and Refusal and the Propertization of Copyright (September 2002)
160. Eric A. Posner, A Theory of the Laws of War (September 2002)
161. Eric A. Posner, Probability Errors: Some Positive and Normative Implications for Tort and Contract Law (September 2002)
162. Lior Jacob Strahilevitz, Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks (September 2002)
163. David A. Weisbach, Does the X-Tax Mark the Spot? (September 2002)
164. Cass R. Sunstein, Conformity and Dissent (September 2002)
165. Cass R. Sunstein, Hazardous Heuristics (October 2002)
166. Douglas Lichtman, Uncertainty and the Standard for Preliminary Relief (October 2002)
167. Edward T. Swaine, Rational Custom (November 2002)
168. Julie Roin, Truth in Government: Beyond the Tax Expenditure Budget (November 2002)
169. Avraham D. Tabbach, Criminal Behavior, Sanctions, and Income Taxation: An Economic Analysis (November 2002)

170. Richard A. Epstein, In Defense of “Old” Public Health: The Legal Framework for the Regulation of Public Health (December 2002)
171. Richard A. Epstein, Animals as Objects, or Subjects, of Rights (December 2002)
172. David A. Weisbach, Taxation and Risk-Taking with Multiple Tax Rates (December 2002)
173. Douglas G. Baird and Robert K. Rasmussen, The End of Bankruptcy (December 2002)
174. Richard A. Epstein, Into the Frying Pan: Standing and Privity under the Telecommunications Act of 1996 and Beyond (December 2002)
175. Douglas G. Baird, In Coase’s Footsteps (January 2003)
176. David A. Weisbach, Measurement and Tax Depreciation Policy: The Case of Short-Term Assets (January 2003)
177. Randal C. Picker, Understanding Statutory Bundles: Does the Sherman Act Come with the 1996 Telecommunications Act? (January 2003)
178. Douglas Lichtman and Randal C. Picker, Entry Policy in Local Telecommunications: *Iowa Utilities* and *Verizon* (January 2003)
179. William Landes and Douglas Lichtman, Indirect Liability for Copyright Infringement: An Economic Perspective (February 2003)

180. Cass R. Sunstein, Moral Heuristics (March 2003)
181. Amitai Aviram, Regulation by Networks (March 2003)
182. Richard A. Epstein, Class Actions: Aggregation, Amplification *and* Distortion (April 2003)
183. Richard A. Epstein, The “Necessary” History of Property and Liberty (April 2003)
184. Eric A. Posner, Transfer Regulations and Cost-Effectiveness Analysis (April 2003)
185. Cass R. Sunstein and Richard H. Thaler, Libertarian Paternalism Is Not an Oxymoron (May 2003)
186. Alan O. Sykes, The Economics of WTO Rules on Subsidies and Countervailing Measures (May 2003)
187. Alan O. Sykes, The Safeguards Mess: A Critique of WTO Jurisprudence (May 2003)
188. Alan O. Sykes, International Trade and Human Rights: An Economic Perspective (May 2003)
189. Saul Levmore and Kyle Logue, Insuring against Terrorism—and Crime (June 2003)
190. Richard A. Epstein, Trade Secrets as Private Property: Their Constitutional Protection (June 2003)