Overview and Economic Analysis of Property and Criminal Law

Edited with an introduction by

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Introduction

Over the past four decades, economic analysis has permeated courtrooms and regulatory agencies and has dominated scholarly legal writing.[1] Although people have used economics to study and formulate laws regulating market behavior since Adam Smith's time, they did not use formal economic theory to analyze larger areas of law until about 1960. Many view the economic approach to law as the most important development in legal scholarship of this century.[2]

The three volumes entitled *Law and Economics* contain some of the key commentaries on the application of economic analysis to law. To engage readers who have a lively interest in the field but do not wish to relearn multivariate calculus, I have excluded certain seminal articles. Instead, I provide comprehensive bibliographies and highlight major contributions in the introductions to each volume. The first part of this volume offers several articles that explain (and criticize) the economic approach to law. For ease of exposition, the remainder classifies articles and cases along standard legal lines — property, contract, tort, criminal, and the like. Yet, as many of the included works show, the unifying principles of economics often blur these boundaries.

Economic Analysis of Law: A Primer

Economists study the allocation of scarce resources. The principal standard that economists use to evaluate resource allocation is efficiency. By definition, an allocation is "Pareto efficient" if all reallocations make at least one person worse off.[3] Pareto efficiency is not a concrete notion to most people, however, nor is it the only definition of efficiency used by economists. And measuring "well-being" is not necessarily a simple matter. What is more, some people use efficiency as a normative criterion, whereas others simply gauge whether an allocation is efficient or not. Given these ambiguities, one can see why the economic analysis of law is often misunderstood and misapplied.

A Closer Look at Economic Concepts

To clarify, we must elaborate on some of these concepts. We are all born with a certain amount of intelligence, inherited property, and the like. Given these endowments, we can voluntarily trade with other people to make ourselves better off — transforming

brute strength or native wit into wages that will pay for food and shelter, selling the family homestead in order to buy an uptown condominium, and so forth. Any such trade that makes at least one person feel better off (and no one worse off) is called Pareto-improving; the resulting reallocation of resources is termed Pareto superior to the initial allocation. Provided that resource reallocation is voluntary, only Pareto-improving trades will take place. If people can voluntarily make Pareto-improving trades until they exhaust all gains from trade, a society can achieve a Pareto-efficient allocation of resources. Two points are worth mentioning. A given initial endowment can yield many different Pareto-efficient final endowments, because people have different degrees of bargaining power. Also, initial endowments may influence people's willingness to trade and therefore affect final endowments.

Not all reallocation in a society is voluntary, of course. In particular, rules of law can alter ownership of assets (and liabilities, for that matter). New highway beautification acts can limit the use of roadside billboards, for example, conferring benefits upon drivers who like to look at trees and reducing profits for billboard manufacturers and users. Suppose the new law required the winners (leaf peepers) to compensate the losers (billboard interests). If the winners could do so and still feel better off, we could say that this law promotes a Pareto-improving reallocation. Why wouldn't people come up with this reallocation without a law? They might. But in large, complex societies, transaction costs may make such exchanges too cumbersome for private parties to achieve on their own.

Many laws do not make winners compensate losers. Yet we might still want highway beautification acts because society gains more than it loses from such laws. A legal rule that confers greater total benefits than total costs (without necessarily requiring winners to compensate losers) passes a different efficiency test: the Kaldor-Hicks standard.[4] Most economists have the Kaldor-Hicks standard in mind when they analyze rules of law. One can think of this practice in philosophical terms: What sort of law would we choose if we did not know our initial endowment nor our individual gain or loss from specific laws? In all likelihood, we would favor legal rules that generated net benefits to society.

Thus far, I have left the word "well-being" undefined. Economists generally use the term "utility" to describe an individual's well-being or happiness.[5] But description is one thing: measurement is quite another. To compare "well-being" or "utility" across individuals, economists often adopt a simplifying assumption: a dollar is a dollar no matter who has it. Practically speaking, then, a rule of law that tends to maximize social wealth is efficient.[6]

Most economic analyses of law are positive rather than normative in nature. That is, they gauge only whether a rule of law promotes efficient resource allocation. These sorts of studies take no explicit stand on the "rightness" of efficiency vis-à-vis other criteria; they merely test whether a given legal rule tends to maximize society's wealth (or whether a change in law will tend to increase social wealth). Questions asked might include these: To obtain a given reduction in crime, is it cheaper to increase the number of policemen, lengthen jail terms, or install more street lights? What sort of patent law will encourage the most innovation for a given amount of monopoly profits? To reduce carbon monoxide emissions to a given level by a given date, does it cost less

to impose taxes, issue tradeable permits, regulate inputs, or use an alternative method? Some positive analyses also focus on incentives that laws give to certain sectors or individuals. These studies might ask questions like the following: What will happen to the safety of the workplace or the availability of a product if a given law is adopted? How might a change in law affect the number of cases brought to court, the percentage of marriages that end in divorce, the consumption of drugs, or the proportion of charitable giving among wealthy persons? How might people alter their driving behavior if cars come equipped with seatbelts or airbags? For the most part, the articles included in these volumes are positive rather than normative analyses; many of them are empirically based as well.

Economists, like anyone else, hold opinions on how wealth and other goods should be distributed in a society. Yet most economists consider these personal opinions rather than matters for professional advice.[7] Economists can estimate distributional effects of policies – for example, the likely effects of property tax changes upon the net wealth of families in upper-, middle-, and lower-wealth categories. They can assess which redistributive mechanisms are likely to cost the least.[8] But economists have no comparative advantage in determining what distribution squares with the goals of a particular society; they tend to leave this to voters and policymakers.[9]

Efficient Law and the Coase Theorem

Ronald Coase's 1960 article "The Problem of Social Cost" revolutionized intellectual thought about the role and functioning of law. The nub of his theory is this: if transaction costs were zero, a society would end up with an efficient allocation of resources regardless of legal rules. Different initial endowments could lead to different final outcomes, of course, but the outcome itself would be efficient. Because transaction costs are generally positive, however, laws may or may not promote efficiency. If efficiency is a criterion worth considering, then lawmakers and ordinary citizens alike have a compelling interest in knowing the likely effects of laws on total wealth.

Coase's powerful insight led to a great outpouring of scholarly work, most notably by his University of Chicago colleague Richard Posner.[10] A host of followers now look at law through the lens of economics; most major law schools and economics departments teach courses in the economic analysis of law. Although professors and researchers often use traditional legal categories – property, contract, tort, criminal, civil procedure, and the like — to break down subject matter, economic analysis has helped erase artificial distinctions. Robert Cooter and Daniel Rubinfeld concisely capture the essence of efficiency in law. As they explain, legal disputes are resolved efficiently when costs of dispute resolution are minimized, legal liabilities go to parties who can bear them at least cost, and legal entitlements go to those who value them most.[11] If the law accomplishes this, a society will maximize its wealth.

Yet what does this mean, practically speaking? One issue is what sort of law might govern a particular activity. If different systems — common law, legislation, regulation, or simply social norms — lead to the same allocative results, then efficiency considerations would favor choosing the system that is cheapest to administer. If the chosen system starts to yield inefficient allocative results as a society grows larger or

more complicated, then lawmakers must consider how to balance administrative and allocative concerns. At some point, efficiency may require the society to switch to a more costly administrative apparatus that moves it closer to an efficient allocation.

Another relevant issue has to do with the rules chosen within a given system — the common law, say — to cope with particular situations. When people can transact cheaply, efficient common law would contain absolute, all-or-nothing rules such as injunctions, strict liability, or no liability. Why? Cheap administration. Because legal rules do not matter for allocative purposes when transaction costs are low, cheaply administered rules will yield overall efficiency. Suppose I can enjoin my neighbor from building a second-story addition because it will block my view of the lake. If he values the right to build more than I value the clear view, the injunctive remedy will simply encourage us to negotiate around it — he will buy me off and build his addition. By the same token, if I cannot obtain an injunction, he will build. Either way, my neighbor ends up with a property right that he values more than I. When transaction costs are large, however, absolute rules run the risk of assigning property rights to the "wrong" party — the one who values an asset least. Because people cannot easily rectify the situation on their own, absolute rules could lead to inefficient allocations of property rights. Return to the erstwhile builder. Now suppose he is surrounded by neighbors, any one of whom could obtain an injunction. If he values his addition more than all the neighbors together value their view, transaction costs could preclude bargaining. No addition would arise, despite the man's higher valuation. Here, rules that cost more to administer — liability and damages, for example — would likely lead to greater efficiency.

Two included articles use this sort of unified approach to look at law. The oft-cited paper by Guido Calabresi and A. Douglas Melamed examines large areas of law to see if they seem efficient and to decipher the efficiency and distributional considerations that may have influenced them. Robert Cooter's article has the same flavor. Both works try to explain why different fields of law tend to use different types of rules.

Reactions to the Economic Analysis of Law

Many scholars embrace the economic approach to law; others malign it. Criticisms range from attacks on its apparent conservatism to accusations that it is not conservative enough.[12] Often, detractors of the approach confuse positive with normative analysis. Much of the empirical work examining the law — particularly common law — simply seeks to demonstrate whether chosen legal rules tend to maximize social wealth.

Some criticism rests on the supposition that the economic approach favors the status quo. Ronald Dworkin in particular argues that the economic approach is a disguised theory of rights that either fails to contain judgments on appropriate initial allocations or approves of whatever allocation actually exists.[13] Supporters of the economic approach — especially Richard Posner — point out two flaws in Dworkin's argument. First, positive theory evaluates only whether, starting from a *given* initial allocation of rights and resources, the law tends to lead to efficiency. It does not typically pass judgment on the merits of a particular initial allocation. Second, to the extent the wealth-maximization principle leads to any recommendation of initial allocation, it

requires that, if transaction costs are positive, rights should vest initially in those who are likely to value them most. Specifically, people should initially have rights to their own bodies — they should be able to sell their own labor and choose their own sexual partners.[14]

Critics of the economic approach also question why lawmakers would necessarily promote efficiency when other goals like justice are also compelling. One response, at least in the common-law context, is that litigants are responsible for efficient law. Inefficient legal rules impose greater costs upon interested parties than efficient rules, so people will tend to litigate until efficient rules result.[15]

Property Law

Property law addresses four major questions: How do people initially obtain property rights? What can be privately owned? What can people do with their property? What are appropriate remedies for the violation of property rights? The economic approach to law helps frame the answers to each question. The following paragraphs group these answers into two areas: initial assignment of rights, and public versus private issues.

Initial Assignment of Property Rights

The cases of *Pierson* v. *Post* and *Edwards* v. *Sims* discuss some methods by which a society can assign initial property rights. Unowned property could be tied to owned property (like land). Alternatively, it could go to the person who first possesses it, or who first adds value to it, or who first shows an intent to possess it. Particular facts and costs offer empirical evidence about the efficient rule for a given situation. *Pierson* shows that a first-possession rule is easy to administer but raises the question of allocative efficiency: will fewer foxes be killed (and thus more crops and poultry destroyed) if sportsmen riding to the hounds are not entitled to a trophy fox? Most commentators answer with a resounding "no": farmers will kill foxes if hunters do not. Efficiency therefore tends to favor the easily administered rule of first possession in *Pierson*. In *Edwards*, the question is whether a cave belongs to the person who owns the land above it or the person who owns the cave entrance. The dissent shows that tied ownership may be costly to administer (because underground surveys can be expensive) and might deny people the use of a productive asset.

Pierson and *Edwards* may lead one to believe that a first-possession rule is always efficient. Yet this rule has an important drawback: it can lead people to spend considerable money and effort in attempts to gain initial possession. In some situations, then, other initial assignment rules lead to greater efficiency. For example, some jurisdictions use first-to-search or treasure-trove rules to assign rights to unclaimed valuables.[16] As a result, people will do productive things rather than overinvest resources trying to acquire ownership. The included articles by Harold Demsetz and Robert Ellickson use economics to help explain the development of property-assignment rules for two interesting cultures — Native American tribes and Atlantic whalers. The article by Robert Mitchell and Richard Carson has a twist: it scrutinizes the assignment of *undesirable* property rights (hazardous waste facilities).

Public versus Private: Goods, Bads, and Remedies

Much of the subject matter of economics has to do with private goods. Yet economists have long grappled with the problem of providing "public" goods efficiently. Economists mean something very specific by a public good: they refer to a good characterized by non-excludability and nonrivalrous consumption. A town clocktower is an example — I cannot prevent you or anyone else from looking at the clock, and my use of the clock does not prevent your use at the same time. Another example might be an innovative string of easily reproduced computer code. The characteristics of public goods imply that a private market may fail to supply them because individuals cannot reap sufficient returns to make investments — in building clocktowers or creating new software — worthwhile. Efficient provision of public goods may therefore require public support.[17]

Three included articles use an empirical economic approach to investigate law surrounding two potential public goods: lighthouses and information. The papers by Ronald Coase and David van Zandt examine whether lighthouses should be considered public goods. If so, grants of public monopolies or other public support might be necessary to ensure adequate returns to establishing and operating a lighthouse. John Cirace's article considers the necessity of protecting copyrighted materials.[18]

Just as goods come in private and public forms, so do bads. Suppose my neighbor keeps a rotting trash heap in her yard that sends a stench into my kitchen. If mine is the only house nearby, the heap might be considered a private bad. Injunctive remedies will lead to efficiency because transaction costs are low. But if the trash heap affects many people, it creates a public bad. Here, damages or zoning regulations may well be appropriate remedies.[19]

A third public/private issue arises in determining when people can defend their property privately and when they must rely on public protection. The cases of *Bird v. Holbrook* and *Katko v. Briney*, along with Richard Posner's article on killing or wounding to protect a property interest, consider this matter.

Criminal Law

From an economic view, criminal law is a necessary supplement to civil law because an exchange of property rights *without* voluntary consent does not guarantee greater social well-being. Suppose I break into your house and steal your great-grandmother's brooch. For several reasons, civil law may be inadequate for assuring efficiency. I may not be caught. If I am caught, I may not be able to compensate you for the market value of the brooch because I've sold it for heroin that I've already consumed. If I could compensate you for the market value, that amount may not come close to the sentimental value of your heirloom. If I could compensate you fully or return the brooch, I have still created anxiety for you and other people and lessened society's ability to enjoy property.

The literature on the economics of crime and punishment is extensive and often quite mathematical. Many classic articles (especially those by Gary Becker, Isaac Ehrlich, and Steven Shavell) are not easy reading for the non-mathematically inclined. A crude oversimplification of this work yields the following summary statements.

Criminals, like other people, make rational choices and act to maximize their utility subject to constraints. We can therefore use standard economic theory to model criminal behavior. Economics can also aid in developing criminal law and policymaking. One goal might be to minimize the expected social cost of crime, which includes the harm that crime causes and the cost of prevention. The included articles by Gary Becker and Steven Shavell use a minimum-cost approach to evaluate, respectively, drug legalization and optimal incapacitation. George Stigler's seminal article explains why punishments need to fit crimes. In an innovative application, Robert McCormick and Robert Tollison use the relationship between number of referees in college basketball and number of called fouls to show why arrest statistics may not accurately reflect the quality of law enforcement.

NOTES

[1] See Easterbrook (1984) for a discussion of the influence of economics on the Supreme Court. Also see Macey (1994). Landes and Posner (1993) found that the economic approach is by far the most pervasive one used in articles published in major law reviews over the past several years.

[2] See for example Cooter and Ulen (1997). For a short review of the development of legal thought in the U.S., see Thomas Grey, "Modern American Legal Thought," 106 *Yale Law Journal* 493 (1996).

[3] The standard is named after Italian economist Vilfredo Pareto (1848–1923).

[4] Two economists working separately developed this notion, sometimes termed the "potential Pareto standard." See Nicholas Kaldor, "Welfare Propositions of Economics and Interpersonal Comparisons of Utility," 49 *Economic Journal* 549 (1939), and Sir John Hicks, "The Valuation of Social Income," 7 *Economica* 105 (1940).

[5] The term sprang from the writings of philosopher-economist Jeremy Bentham (1748–1832).

[6] Although not everyone adopts the wealth concept, Richard Posner's article "The Value of Wealth," (included in this volume) makes a compelling argument for its use.

[7] For a variety of views on whether the common law should — or even can — promote any goals other than efficiency, see particularly the articles by Calabresi and Melamed, Horwitz, Posner (two papers), and Calabresi included in the first part of this volume.

[8] This is of course an efficiency issue — most people would rather achieve a given distributional goal at a lower cost rather than a higher cost. Economists typically find that tax-and-transfer policies are better mechanisms than property law for redistributing wealth, for example. Why? Because taxation targets inequalities on an individual basis whereas property law deals with averages and groups — farmers versus ranchers, for instance. Also, property owners may be landlords rather than users, so property law may simply redistribute wealth among landlords rather than among users. Finally, property law tends to cost more than tax law to administer. See Cooter and Ulen (1997), pp. 104–6, for elaboration.

[9] Arnold Harberger offers a unique perspective on tradeoffs. He asks, in essence, how much efficiency we are willing to sacrifice to satisfy basic needs for everyone. See Harberger, "Three Basic Postulates for Applied Welfare Economics," 9 *Journal of Economic Literature* 785 (1971).

[10] Professor Posner is now Chief Judge on the Seventh Circuit Court of Appeals. The University of Chicago has been a hotbed of law and economics for years and includes numerous scholars. See Stigler (1983). As mentioned, an older strain of law and economics — much of it concerned with firms, market activity, regulation, and antitrust law — also exists. Volume II looks at this literature.

[11] Cooter and Rubinfeld (1989), p. 1070.

[12] See Morton Horwitz's paper and the articles by Dworkin and Coleman listed in the reference section for examples of the former; see Buchanan (1974) for the latter. Guido Calabresi's letter to Ronald Dworkin (included in this volume) helps illuminate Dworkin's view.

[13] See particularly Dworkin (1977).

[14] For a longer exposition, see Posner (1979). Also see Posner's "Uses and Abuses," (included in this volume).

[15] See Rubin (1977), Priest (1977), Cooter and Rubinfeld (1989). To some extent, this sort of reasoning can apply to legal rules other than those created by common law.

[16] A treasure-trove rule gives a set reward to finders and the remainder of the treasure to the state.

[17] Economics guides us in setting appropriate conditions for the use of eminent domain, for example.

The government's power to take private property is essentially a bypass of the market process. Using eminent domain may be necessary to prevent people from holding out for exorbitant compensation and to minimize bargaining costs. Yet certain restrictions on governmental power also make sense: eminent domain should be used only for the provision of public goods, because private goods are easily allocated through the market. And, to prevent waste, governments should pay market compensation for taken property. A classic case in this area is *Poletown* v *City of Detroit*, 304 N.W.2d 455 (Mich. 1981).

[18] Economists use the term "positive externality" to describe external benefits created by private activities. If my behavior confers benefits upon you that I do not reap, I will not engage in enough of the beneficial activity. Thus arises the argument for public provision of "public" goods. See also Cheung (1974).

[19] Oft-cited cases include *Spur* v *Webb*, 494 P.2d 700 (Ariz. 1972), for a private nuisance and *Boomer* v *Atlantic Cement Co.*, 257 N.E.2d 87 (Ct. App. N.Y., 1970), for a public nuisance. These sorts of bads are also termed "negative externalities." If my actions impose costs upon you (and I care nothing about your suffering), I have created a negative externality. I will engage in too much of an activity if I do not bear all the costs of that activity. The law can force me to internalize this external effect.

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Property Law

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THE PROBLEM OF SOCIAL COST

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I. The Problem To Be Examined[1]

This paper is concerned with those actions of business firms which have harmful effects on others. The standard example is that of a factory the smoke from which has harmful effects on those occupying neighbouring properties. The economic analysis of such a situation has usually proceeded in terms of a divergence between the private and social product of the factory, in which economists have largely followed the treatment of Pigou in *The Economics of Welfare*. The conclusions to which this kind of analysis seems to have led most economists is that it would be desirable to make the owner of the factory liable for the damage caused to those injured by the smoke, or alternatively, to place a tax on the factory owner varying with the amount of smoke produced and equivalent in money terms to the damage it would cause, or finally, to exclude the factory from residential districts (and presumably from other

[1] This article, although concerned with a technical problem of economic analysis, arose out of the study of the Political Economy of Broadcasting which I am now conducting. The argument of the present article was implicit in a previous article dealing with the problem of allocating radio and television frequencies (The Federal Communications Commission, 2 J. Law & Econ. [1959]) but comments which I have received seemed to suggest that it would be desirable to deal with the question in a more explicit way and without reference to the original problem for the solution of which the analysis was developed.