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Laws and prices: How economics contributed to Law by misunderstanding morality

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LAWS AND PRICES: HOW ECONOMICS CONTRIBUTED TO LAW BY MISUNDERSTANDING MORALITY

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The state directs behavior by laws, whereas markets direct behavior by prices. My subject is the relationship between laws and prices. I will review some penetrating insights into the law of torts, contracts, and crimes, which were made by treating laws as prices. Then I will also explain how treating laws as prices prevents economists from analyzing the internalization of morality and the evolution of norms, which contribute decisively to the efficiency of the economy and the making of law.

A. A NICHE IN THE INTELLECTUAL ECOLOGY

The jurisprudential tradition known as the "imperative theory" defines a *law* as an obligation backed by a state sanction.[2] The canonical form of a law states who should do what in which circumstances and how much violators will be sanctioned.[3] For example, "Drivers are forbidden to exceed 90KM in the village and violators will be fined 10,000 pesetas." The sanction tends too deter violation of the obligation. Lawyers and philosophers thought hard about the deterrence effects of sanctions from the beginning of European legal theory more than 2,000 years ago. Hard thinking, however, is not the same as science. A mature science consists in precise propositions confirmed by empirical testing and joined by deductive reasoning.

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2. For a review of this tradition, see Joseph Raz, *The Concept of a Legal System* (New York. Oxford U.P., 2nd ed., 1980).

3. Explanation and critique of the imperative theory is in Raz, op. cit. in preceding footnote, and see H.L.A. Hart, *Concept of Law* (Oxford, Clarendon Press, 1961).

The legal tradition contained no scientific theory to predict the deterrence effects of sanctions.

Economists define a *price* as the exchange ratio between a good and the numeraire. For example, the price of a bushel of wheat in America is the rate at which it exchanges for dollars. Economists extend the concept of a price beyond markets by generalizing exchange ratios to tradeoffs, such as the tradeoff between safety and speed in driving an automobile. The economic analysis of law achieved much of its early success by treating a sanction as the price for violating a legal duty. To illustrate, the proposition that increasing the sanction will cause fewer people to violate the law in question corresponds to the proposition that an increase in the price of a good will cause fewer people to buy it. Making the connection between sanctions and price theory in the 1960s, which seems obvious in retrospect, marks the beginning of a new epoch. Price theory, which was developed mathematically and confirmed econometrically over many decades, is a mature science. In the new epoch, legal theory contains science.

Besides predicting responses to sanctions, economics provides a useful normative standard for evaluating law and policy. To illustrate, a judge from the California Supreme Court recently presided over a "moot court" (pretend court) for law students. After listening to an hour of technical legal arguments, he banged his fist on the table and said, "What are the policy arguments? This is the highest court in California and we want to know the policy arguments!" To make law, judges and other officials need to know its effects on policy values. Economists specialize in predicting the effects of policies on two values: efficiency and distribution. It is always better to achieve a given policy at lower cost than higher cost, so efficiency is always relevant to policy. While efficiency is always relevant to policy, it is seldom dispositive. Policy makers usually want to know how their decisions affect the distribution of income across classes and groups.

Almost everyone agrees that the state should pursue policies efficiently rather than inefficiently, but many people disagree about policy goals concerning the distribution of income. Some people think that government should redistribute wealth from rich to poor for the sake of social justice, whereas other people think that government should avoid redistributing wealth. Like the rest of the population, economists disagree among themselves about redistributive ends. Unlike other people, many economists agree about redistributive means. Most economists who study law believe that redistributive goals can be accomplished better in modern states by progressive taxation than by reshuffling legal rights in such fields as torts, contracts, and crimes.

I can only mention a few of the reasons why economists believe that broad-based taxes are a better tool of redistribution than private or criminal law. First, redistributing a dollar from one group to another uses up some of it. Redistribution by courts costs much more than redistribution by taxes. To illustrate, a plaintiff's attorney in the US routinely charges one third of the judgment, whereas an accountant who prepares someone's income tax return

charges a small fraction of the person's tax liability. Second, redistribution by legal rights distorts the economy far more than progressive taxation. For example, transferring a small amount of wealth through income taxation causes a relatively small change in the behavior of tax payers, whereas transferring the same amount of wealth by assigning tort liability for the side-effects of medicinal drugs will cause a relatively large change in the behavior of drug companies.[4] Third, the income tax targets inequality precisely, whereas private law and crimes relies upon crude averages. To illustrate, a tort rule that assigns liability to drivers instead of pedestrians in order to redistribute income would rely upon the crude average that drivers are wealthier than pedestrians. Fourth, reshuffling legal rights may not have the distributive effects anticipated. To illustrate, increased tort liability for large corporations may cause prices to rise for consumers, rather than causing stock prices to fall for owners.

B. SANCTIONS AS PRICES

I have explained that law lacked a behavioral science to predict the effect of changes in sanctions upon behavior, and that law also lacked a policy science to predict the effect of changes in sanctions upon policy values such as efficiency and distribution. In the 1970s and 1980s, economics rapidly filled this hole in the intellectual ecology, rather like the rabbit filled a hole in the ecology of Australia. Now I turn to a brief account of the most important results from applying price theory to private law and crimes. Since most economists who study law disapprove of the pursuit of distributive justice through private and criminal law, most economic models of private law and crimes concern efficiency, not distribution. Consequently, I mostly discuss results concerned with efficiency.

a) PERFECT COMPENSATION

Compensatory damages are the most frequent remedy for private disputes. In order to understand the behavioral consequences of this remedy, consider the ideal of "perfectly compensatory damages." Damages are perfectly compensatory when they restore the plaintiff to the same level of well-being that he would have enjoyed without the harm caused by the defendant. In other words, money damages put the plaintiff- victim on the same utility curve as he would have been on without the injury. To illustrate, breach of a contract to deliver a good often creates liability for the cost of purchasing an exact substitute.

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4. Taxes distort less when applied to a broad base rather than to a narrow base. Distortion decreases with the breadth of the base because demand becomes less elastic. To illustrate, the demand for food is less elastic than the demand for vegetables, and the demand for vegetables is less elastic than the demand for carrots. Income is a very broad base.

The concept of perfectly compensatory damages also removes some confusion about compensation in torts. Accidents cause various kinds of costs such as medical care, foregone earnings, and pain and suffering. Different jurisdictions in different countries allow recovery for these costs to different extents. For example, some jurisdictions allowed generous recovery for pain and suffering, and other jurisdictions do not. Pain and suffering are real costs that the victim would pay to avoid. Consequently, injurers should have an incentive to avoid imposing these costs upon victims. Specifically, efficient incentives require that the liability of injurers include the amount that the victim would pay to avoid the pain and suffering caused by the accident. Only this measure of damages makes the injurer internalize the cost of the pain and suffering that he causes to victims.

b) PERFECT DISGORGEMENT AND DETERRENCE

I have been discussing how perfect compensation internalizes social costs. Now I turn to a different sanction with a different purpose. In business life, one person often controls another's assets, such as corporate directors controlling stockholders' investments, or the directors of a pension fund controlling the retirement savings of workers, or a trustee controlling a trust for its beneficiary. Anglo-American law calls this situation the "fiduciary relationship," and economics calls it the "principal-agent relationship." Sometimes the fiduciary breaches his "duty of loyalty" by appropriating part of the principal's asset or its value. For example, the director of a corporation may appropriate for himself a valuable investment opportunity that belongs to the corporation.

The legal remedies for breach of duty of loyalty can be explained using principal-agent theory from economics.[8] The standard remedy for breach of the duty of loyalty is "disgorgement," which means that the fiduciary must give the principal any profit that he obtained from his disloyal act. ("Disgorgement" is similar, but not identical, to "restitution."[9]) In order to understand its behavioral consequences, consider the ideal of "perfect disgorgement." Disgorgement is perfect when damages restore the defendant to the same level of well-being that he would have enjoyed if he had not wronged the plaintiff. In other words, money damages put the injurer on the

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8. Robert Cooter and Bradley J. Freedman, "The Fiduciary Relationship: Its Economic Character and Legal Consequences," *66 New York University Law Review 1045-1075* (1991; with Bradley J. Freedman); reprinted in *Law and Economics, Some Further Insights: 7th European Law and Economics Association Conference, Rome, Sept. 3-5. 1990* (Milano; Sutte, 1991), eds. Roberto Pardolesi and Roger Van den Bergh, pp. 17-50.

9. Restitution requires returning an asset, whereas disgorgement requires returning an asset and any profit obtained from appropriating an asset. To illustrate, if the fiduciary appropriates land belonging to the principal, restitution requires returning the land, whereas disgorgement requires returning the land and any rents obtained from it.

same utility curve as he would have been on without the injury. Notice the exact parallel between the plaintiff-victim under perfect compensation and the defendant-injurer under perfect disgorgement.

A heavier sanction than perfect disgorgement puts the defendant-injurer on a lower utility curve than he would have been on without the injury. For this reason, a heavier sanction than perfect disgorgement can be described as "punitive." By definition, punishment leaves the injurer worse off than if he had not wronged the victim. For example, if the fiduciary who breaches his duty of loyalty must disgorge the profit and pay punitive damages, then he is worse off than if he had not wronged the principal.

Many judges view punishment as appropriate to criminal law and inappropriate to private law. Consequently, courts hesitate to punish either party in a private dispute. Punitive damages are rare in civil cases in America and unknown in many other countries.[10] The reluctance of judges to punish creates a problem of deterring disloyalty by fiduciaries. I will explain the contours of fiduciary law as a solution to the problem of deterring disloyalty without punishment.

A thief is not generally deterred by the threat of having to return what he stole in the event that he gets caught. The threat of having to return the stolen goods only deters the thief who is *certain* to be caught. To illustrate, if disgorgement is the sanction for theft, then a thief who steals $100 expects to gain $50 per theft if he gets caught half the time, whereas he gains $0 if he gets caught every time. Thus deterring disloyal fiduciaries by the threat of disgorgement requires a high level of certainty that the wrong-doer will be sanctioned. Fiduciary law typically departs from other bodies of liability law in order to raise the probability of the sanction. Special rules shift the burden of proof from plaintiff to defendant and permit the court to infer disloyalty from its appearance.[11] The advantage afforded by these rules to the plaintiff in disputes with a fiduciary greatly reduce the probability of unsanctioned appropriation by agents. In addition, judges often use informal punishments for disloyalty, such as castigating the disloyal fiduciary and blackening his reputation. The combination of rules shifting the burden of proof and informal punishment enables fiduciary law to deter disloyalty without resort to formal punishments.

c) RECIPROCAL PUNISHMENT

Having discussed perfect compensation and perfect disgorgement, now I turn to optimal punishment. Sometimes enforcement errs and the wrongdoer escapes without sanction. Errors occur because the wrong goes undetected, or the wrong-doer cannot be identified, or the facts cannot be proved

10. W. Landes and R. Posner, The Economic Structure of Tort Law (Harvard U.P., 1987).

11. See Cooter and J. Freedman, op. cit. at footnote 8.

against the wrong-doer. When enforcement errs, deterring wrong-doing requires punishment, not merely disgorgement. A simple formula computes the minimum punishment that deters a risk-neutral decision-maker from doing wrong.

Define the "expected sanction" as the sanction multiplied by its probability. To illustrate, if the sanction equals $S and its probability equals p, then the expected sanction equals px$S. The rational, self-interested decision maker decides whether to commit a wrong by comparing the benefit and the expected sanction. To keep the computation simple, let the wrong be theft. The benefit of theft to the criminal equals the value of what is stolen, which we denote T. Thus the rational, risk neutral thief[12] is deterred when $T \leq pS$, which implies that $S \geq T/p$. For example, if a thief steals $1,000 and the enforcement probability p equals 1/2, then deterrence requires a punishment of at least $2,000.

I restate this conclusion succinctly. If "y" indicates any number, then 1/y is called the *reciprocal* of y. Define the *reciprocal punishment* as the gain from wrongdoing multiplied by the reciprocal of the enforcement probability. According to the *rule of the reciprocal*, the minimum fine that deters wrongdoing equals the reciprocal punishment.

There are many reasons for preferring the minimum punishment required for deterrence, rather than a more severe punishment. First, any legal system punishes some people by mistake. Applying the minimum punishment for deterrence prevents wrong-doing at least cost to people who are mistakenly punished. Second, punishment is costly to administer. Applying the minimum punishment for deterrence prevents wrong-doing at least cost to the state. Third, applying the minimum punishment required to deter a lesser crime preserves the state's ability to deter more severe crimes.[13] Fourth, the utilitarian tradition holds that punishment is bad in itself, even for those who deserve it, so it should be minimized.[14]

The rule of the reciprocal provides a means to calibrate punishment precisely for thefts punished by fines. However, a fine does not deter unless the convicted defendant can pay it. Thieves often lack the capital required to pay fines equal to a multiple of the value of the stolen goods. The "day fine system" has been developed in northern Europe to overcome the criminal's

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12. Risk-neutrality is the starting point of an analysis of choice under uncertainty. The minimum sanction for deterrence would be adjusted down for risk-averse decision makers and adjusted up for risk-preferring decision makers.

13. To illustrate, assume that the punishment for a certain kind of fraud is a fine. If a thief has the opportunity to steal $1,000 or to steal $2,000, and if the punishment for stealing $1,000 equals the maximum fine that he can pay, then he might as well try to steal $2,000.

14. Utilitarians subtract the pain of sanctions from the total utility of society, which usually implies that the sum of utilities is maximized by setting sanctions at the minimum level required for deterrence.

bankruptcy constraint. According to this system, the fine is denominated in days of income and collected from earnings over a period of time. For example, a criminal who holds a job that pays $120 per day might be sentenced to a "10 day fine," in which case the total fine equals $1,200. The court might set a payment schedule of $120 per month over 1 year. In effect, the state lends the criminal $1,200 because no bank will do so.

When the state cannot overcome the criminal's bankruptcy constraint by such means as day fines, he usually goes to jail. In principle, the rule of the reciprocal applies to incarceration. T denotes the amount stolen. Suppose that the convicted could use the money that he stole to buy back time that he must otherwise spend in jail. Let $\mathcal{T}$ denote the length of time in jail that he would be willing to buy back for T. In other words, $\mathcal{T}$ is the jail-time equivalent of the money value T. Now we substitute the jail-time equivalent into the rule of the reciprocal: $S \geq \mathcal{T}/p$. According to this formula, the minimum sentence that deters wrongdoing equals the jail-time equivalent of the money stolen multiplied by the reciprocal of the enforcement probability.[15]

As demonstrated, the reciprocal punishment deters regardless of whether the sanction is a fine or its jail-time equivalent. However, fines transfer wealth from the criminal to the state, whereas incarceration wastes costly resources. Consequently, the economic analysis provides a strong justification for substituting fines for jail by techniques like the day fine system. The day fine system works well for employed persons who commit thefts. Unfortunately, incarceration may be the only available punishment for unemployed persons who commit violent crimes.

d) DISCONTINUITY

I have described some significant discoveries made by treating sanctions as prices. Now I describe some confusions. A person who pays the price of an act is free to do it, whereas a person who pays the sanction attached to an act is usually forbidden to do it. For example, a person who pays the price of entry may go into a theater, whereas a person who pays damages for colliding with another car is still forbidden to collide with other cars. In other words, freedom underlies a price and an obligation underlies a sanction.

This difference permeates the language of obligations and prices. Obligations are "either-or." Either a person has an obligation or he does not; either an act was right or wrong; either a person is liable or not. In contrast, prices vary continuously. Deals can be ranked from better to worse; costs can be ranked from low to high; sanctions can be ranked from mild to severe. The difference in language extends to behavior. An obligation partitions

15. As before, the criminal is assumed to be risk neutral.

the feasible set into permitted and forbidden zones. At the boundary, costs jump abruptly. To illustrate, consider the example of the law, "Drivers are forbidden to exceed 90KM in the village and violators will be fined 10,000 pesetas." As a driver's speed increases from 90KM to 91KM, his liability jumps from 0 to 10,000 pesetas. Similarly, a manufacturer's liability jumps when the safety of his product deteriorates to the point of being "defective," a homeowner's liability jumps when the safety of his front steps deteriorates to the point of "negligence," and a corporate director's liability jumps when he acquires enough shares in a competing company for his conflict of interest to rise to the level of "disloyalty."

Since costs jump abruptly at the boundary between permitted and forbidden zones, most people find that conforming to an obligation is far cheaper than violating it, and some people find that violating the obligation is far cheaper than conforming to it. Few people are on the margin where conforming to the obligation costs about the same as violating it. Since few people are on the margin, not many respond to a change in the sanction. To illustrate, if a speed limit is enforced rigorously, an increase in the fine for speeding causes a few people to slow down, but most people continue to obey the law just as they did before the fine increased.

In this respect, the decision to obey the speed limit is like the decision to buy a house. Many people do not own a house, and some people own one or two. When rising interest rates increase the cost of buying a house, a few people who would have bought a house change their minds and do not buy. In contrast, every European buys some bread, so an increase in the price of bread causes many people to buy a little less of it. In technical terms, the margin for obligations and houses is "extensive" and the margin for bread is "intensive."

Now consider how behavior responds to a change in an *imprecise* obligation. By "imprecise," I mean that randomness afflicts the decisions of courts about whether behavior close to the boundary is permitted or forbidden. Under these circumstances, most people will exceed the legal standard in order to provide courts with a margin of error.[16] To illustrate, assume that a 90KM speed limit is rigorously enforced by a radar machine that errs by as much as 5% in 30% of the cases. Thus 30% of the cars going 86KM will be held liable for speeding. Given these facts, most people will drive below the speed limit (say at 80KM) in order to escape liability when the radar machine errs.

This analysis can be used to compute the optimal precision of a legal rule. When enforcement is rigorous, almost everyone conforms exactly to a precise standard, and many people over-conform to a vague standard. Assume that uncertainty afflicts the rulemaker, so he must choose between a

16. J. E. Calfee and R. Craswell, "Some Effects of Uncertainty on Compliance With Legal Standards," *70 Virginia Law Review 965* (1984).

vague standard or an exact standard that may not be optimal. The rulemaker thus faces a tradeoff between over-conformity to a vague standard by many people and exact conformity by everyone to the wrong standard. The rulemaker should probably set a vague standard below the presumed optimum initially, and increase the standard while making it more precise as he obtains more information about the social optimum.[17]

C. STRATEGY

In American football, a player often runs around the right side as a decoy to fool the other team while the player carrying the ball runs around the left side. In contrast, a mountain climber never starts up the south slope as a decoy to fool the mountain while the main party climbs up the north slope. Football is strategic and mountain climbing is non-strategic. In strategic games, each player forms his strategy on the assumption that other players form their strategies by anticipating what he will do. In non-strategic games, each player assumes that other players form their strategies without anticipating what he will do.

The distinction between strategic and non-strategic games among people usually depends upon the number of players. In games with many players, each player may assume that his behavior alone cannot affect what others do. To illustrate, each criminal assumes that his crimes cannot affect the state's schedule of criminal sanctions, each consumer assumes that his precaution will not affect the probability of a product being defective, and each commuter assumes that his decision to drive rather than take the bus will not affect the decisions of other commuters. In games with few players, each player may assume that his behavior affects what others do. To illustrate, the two parties in settlement bargaining try to anticipate each other's moves, the principal in a fiduciary relationship drafts a contract that anticipates the response of the agent, and a person who creates a nuisance on his property anticipates the response of his neighbors.

The model of perfectly competitive markets forms the core of price theory. So many people participate in a perfectly competitive market that no one person can affect prices. The original applications of price theory to law mostly treated sanctions like competitive prices, so the models were non-strategic.[18] The economic analysis of law even developed a technique for analyzing strategic behavior as if it were non-strategic. The most famous proposition in the economic analysis of law, the Coase Theorem, asserts that bargaining succeeds so long as strategic behavior and other "transaction

17. G. Hadfield, "Weighing the Value of Vagueness: An Economic Perspective on Precision in Law," *California Law Review* (1994).

18. See the first edition of Richard Posner's *Economic Analysis of Law*.

costs" are not too high. Thus the Coase Theorem treats strategic behavior as a cost of bargaining. In reality, strategic behavior does not resemble the cost of oranges, haircuts, or any other good. Calling strategic behavior a "cost" merely postpones analyzing it.[19]

Game theorists are reworking the economic analysis of law under the assumption that people behave strategically, just as they transformed the study of industrial organization in the 1980's.[20] Consequently, we understand better how sanctions screen and sort people. To illustrate, settlement offers by defendants screen and sort plaintiffs according to the strength of their case. Plaintiffs with strong cases reject a settlement offer and proceed to trial; plaintiffs with moderate cases accept a settlement if offered and go to trial otherwise; and plaintiffs with weak cases accept a settlement if offered and drop the case otherwise. The rational defendant uses these facts to compute the settlement strategy that minimizes his costs.

To illustrate with numbers, assume that the defendant's defective product injured people who sue for compensatory damages. Each plaintiff knows how badly he was injured. The defendant can distinguish between injured and uninjured plaintiffs before trial, but the defendant cannot distinguish among plaintiffs by the seriousness of the injury until after trial. Litigation costs the plaintiff and defendant $2,000 each. Consider how risk-neutral plaintiffs respond when the defendant makes a single settlement offer of $1,500 to 1/3 of the injured plaintiffs chosen at random. Potential plaintiffs can be divided into 3 groups. Anyone whose expected judgment exceeds $3,500 complains, rejects the settlement if offered, and goes to trial. Anyone whose expected judgment lies between $3,500 and $2,000 complains, accepts the settlement if offered, and goes to trial if no settlement is offered. Anyone whose expected judgment lies below $2,000 complains, accepts the settlement if offered, and drops the complaint if no settlement is offered. If the defendant varies the settlement offer or the proportion of plaintiffs who receive it, the number of people in these 3 groups changes. The rational defendant computes the settlement strategy that minimizes his total costs.

Generalizing, we can say that economics provides a behavioral theory to predict how people respond to changes in laws. At the simplest level, where people respond to the sanctions imposed by the state, but not to each other, price theory predicts how changes in sanctions change behavior. At a more complex level, where people respond to the state and each other, game theory predicts how changes in laws change interactions. Treating sanctions as prices caused theorists to treat strategic behavior as non-strategic, but this defect is being overcome.

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19. R. Coase, "The Problem of Social Cost," *3 J. L. & Econ. 1* (1960). A critique based on strategic behavior is in Cooter, "The Cost of Coase," *11 J. Legal Stud. 1* (1982).

20. E. Rasmusen, *Game Theory*... 1989). Baird, Picker, ...(forthcoming).

D. MORAL PSYCHOLOGY

Treating sanctions as prices creates confusions about discontinuity and strategy, which can be corrected within the scope of modern economics by using discrete choice theory and game theory. Now I turn to some deeper confusions that stretch the boundaries of the economic tradition. Max Weber argued that Protestant Christians regard occupational choice as a religious calling, which causes people to internalize occupational roles. Internalization of occupational roles increases the dedication and creativity with which people pursue business goals. Dedication and creativity enables people to cooperate together in large organizations that apply technical knowledge and achieve scale economies. According to Weber, the Protestant ethic brought the discipline of the monastery into the conduct of business, which perfected instrumental rationality as a mode of behavior and created the industrial revolution.[21]

I restate Weber's claims in the language of modern economics. The need for many people to cooperate in a complex economy creates problems of information and motivation. For example, each employee in a large organizations that applies science to production works under the direction of others and gets paid a fraction of the value that he cooperates in producing. The "agency problem" is to design organizations and contracts to elicit effort and creativity from such workers. Eliciting effort and creativity requires aligning the self-interest of agents with the principal's interests. However, the narrow self-interest of agents never aligns perfectly with the principal's interests. The agency problems becomes manageable in modern economies because people internalize occupational roles, which broadens their self-interest. When subordinates internalize occupational roles, they require less monitoring by superiors. Less monitoring lowers the transaction costs of contracting and managing hierarchies. Thus internalization of occupational roles is the ultimate form of decentralization, which prevents the constraints of information and motivation from strangling the modern economy.

Psychologists have extensively researched the internalization of norms. Piaget, Kohlberg, and others sketched stages in the development of moral reasoning among children.[22] According to their theories, a child perfects the

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21. Max Weber. *The Protestant Ethic and the Spirit of Capitalism* (tr. Talcott Parsons, New York, Scribner, 2nd ed., 1976); also see various passages in *Economy and Society*.

22. Lawrence Kohlberg, "Moral Stages and Moralization: The Cognitive-Developmental Approach," *Moral Development and Behavior: Theory, Research, and Social Issues* (New York, Holt, Rinehart and Winston, 1976), ed. Thomas Lickona, pp. 31-53; "Stage and Sequence: The Cognitive-Development Approach to Socialization," in D.A. Goslin, ed. *Handbook of Socialization Theory and Research* (Chicago, Rand McNally, 1969); L. Kohlberg, *The Philosophy of Moral Development: Moral Stages and the Idea of Justice* (San Franciso, Harper & Row, 1981); "Appendix. The Six Stages of Moral Judgment," *The Philosophy of Moral Development: Essays*

ability to internalize norms as it acquires a capacity for abstract reasoning. Their research makes internalization sound cool and rational. In contrast, "depth psychology" often traces internalization of morality to irrational processes that are hot and inchoate. According to these theories, internalization of morality ingrains new impulses in a child through emotional experiences. An example is Freud's theory of morality as the "ghost in the nursery," meaning the repressed memory of parental punishments.[23]

Both types of internalization—accepting reasons and ingraining impulses—create new motives, which can tip the individual's motivational balance. Economic models often view motivation as a calculus of psychological benefits and costs.[24] Internalization can change the sign of the net psychological benefits attached to an act. For example, internalization of morality creates subjective costs to non-cooperation that can shift the dominant strategy in a game from non-cooperation to cooperation.[25]

Internalization of occupational roles changes preferences and decisively affects economic performance. However, economic theory cannot explain internalization or predict its occurrence. Filling this gap requires a theory of endogenous preferences linking economics and the psychology of personality development. A theory of endogenous preferences requires the expansion of decision theory to encompass the choice of who to become. Choosing among selves involves distinctive problems from choosing among commodities.

To illustrate, consider the endogeneous self-interest. Internalizing an occupational role involves accepting the norms of an occupation so intimately that they enter the individual's self-conception. As soon as an individual takes norms into his self-conception, he distinguishes two kinds of self-interest. The simplest self-interest, which I call "thin self-interest," looks only to objective payoffs in wealth or power. The more complex self-interest, which I call "thick self-interest," modifies objective payoffs to encompass the subjective value of morality. For example, many lawyers pursue power and wealth through their profession. In addition, some people aspire to be "good

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on Moral Development, Volume I (1981), 409-412. Flaws in Kohlberg's approach have generated much criticism from feminists, notably Carol Gilligan, *In a Different Voice: The Psy-chology of Women's Development* (Cambridge, Mass., Harvard U.P., 1982), p. 8 and pp. 16-17.

23. In Freud's account, morality is the repressed memory of punishment and threats from father. In technical terms, the super-ego emerges when the child represses his Oedipal fears. See Sigmund Freud, *The Ego and the Id* (New York, Norton, 1962), trans. Joan Riviere, revised and edited by James Strachey. A clear discussion of these ideas is provided by Richard Wollheim in "The Last Phase," *Sigmund Freud* (Viking Press, New York, 1971), Chapter 7.

24. Anti-utilitarian philosphers typically reject the theory that conforming to a principle of morality involves weighing benefits and costs. For example, see Joseph Raz on *The Morality of Freedom (New York, Oxford U.P., 1986).*

25. See Cooter, "Structural Adjudication and the New Law Merchant: A Model of Decentrali-zed Law," *International Review of Law and Economics* (forthcoming, 1994).

lawyers," meaning people whose work embodies the virtues of the legal profession. The virtues of the profession include both its ethical standards and its technical craft.

Internalizing a role "thickens" self-interest to include the obligations and goals of an occupation. Thus the best workers *express themselves* by showing who they are through their work. Their work shows who they are by reflecting what they have internalized. Contemporary economics says nothing about self-expression through work.

When self-interest thickens, conflicts arise between the thin and thick selves. For example, a lawyer may feel tom between being a "good lawyer" and getting rich by shady means. Internal conflict, which is the subject of much psychology and moral philosophy, has only recently found a place in economic models. Economists usually assume that an actor chooses by ordering alternatives from better to worse. When modeling internal conflict, the actor chooses by drawing from a probability distribution over two different orderings of the alternatives. One ordering might represent the thin self, the other ordering might represent the thick self, and the probability distribution might be determined by the actor's strength of will.[26]

The difference between thin and thick conceptions of self-interest relates to a fundamental tension between economics and law. The ideal economic decision maker is "perfectly rational," which means utterly instrumental in pursuing explicit ends. The ideal legal decision maker is "completely reasonable," which means that he has internalized social morality. The rational actor's self-conception is thin, whereas the reasonable actor's self-conception is thick. Without a thick conception of self-interest, economic analysis cannot answer important legal questions about reasonableness. Adjudicating the reasonableness of professional norms involves weighing the benefits and costs of internalization. For example, how far should a fiduciary go in subordinating his interest to the beneficiary's? As another example, most crimes cannot be committed accidentally or by the insane. These crimes presuppose criminal intent or "mens rea." To have criminal intent, the actor must know the difference between right and wrong, and choose to do wrong. The contribution of economics to understanding this problem must remain modest until decision theory encompasses psychological conflict between right and wrong.

E. THE NEW LAW MERCHANT

Having discussed the internalization of norms by individuals, I will now discuss the evolution of norms in communities. The modern economy crea-

26. A model with citations is found in my paper entitled, "Lapses, Conflict, and Akrasia in Torts and Crimes: Towards An Economic Theory of the Will," *11 International Review of Law and Economics 149-164* (1991).

tes many specialized business communities, which may form around a technology such as computer software, a body of knowledge such as accounting, or a particular product such as credit cards. People develop relationships with each other through repeated interactions in a community, and norms arise to coordinate their interaction. The formality of the norms varies from one business to another. Self-regulating professions, like law and accounting, and formal networks like Visa,[27] promulgate their own rules. Voluntary associations, like the Association of Home Appliance Manufacturers, issue guidelines.[28] Informal networks, such as the computer software manufacturers, have inchoate ethical standards. I refer to all such norms of business communities as the "new law merchant."[29]

The new law merchant arises outside of the state's apparatus for making law. However, lawmakers are pulled into the affairs of business communities by insiders who look to the state to resolve their disputes and make their laws, and lawmakers are pushed into the affairs of business communities by outsiders who seek to regulate private wealth and power. How should the state respond? The traditional account of the "law merchant," from which the phrase the "new law merchant" is adapted, provides a model. The merchants in the medieval trade fairs of England developed their own rules and, in some cases, their own courts. However, as the English legal system became stronger and more unified, English judges increasingly assumed jurisdiction over disputes among merchants. The English judges did not know enough about these specialized businesses to evaluate alternative rules.[30] Instead of imposing rules, the traditional history asserts that English judges tried to find out what practices already existed among the merchants and enforce them. By this process, the law merchant was allegedly absorbed into English common law. The pinnacle of this process was the development of the law of bills and notes in the 18th century by Judge Mansfield.[31]

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27. The Visa payments network is actually divided into two corporations with different operating rules, one for American transactions and the other for international transactions.

28. David Hemenway. *Industrywide Voluntary Producer Standards* (Ballinger, 1975).

29. The term has also been applied more restrictively to norms of international trade invoked in arbitration and mediation.

30. Wolfgang Fikentscher once remarked, "The decisions of the Munich traffic court of appeals concerning motor vehicle accidents improved markedly after the judges learned to drive."

31. The traditional theory is developed by Holden in *Early History of Negotiable Instruments* (19). Holden is criticized in John Baker in "The Law Merchant and the Common Law Before 1700," *Cambridge Law J.* vol 38 p. 295 (1979). A revised view, which stresses that Mansfield immersed himself in the minutiae of business practice in order to extract the best principles from it, is found in Jim Rogers, *The Early History of the Law of Bills and Notes: A Study of the Origins of Anglo-American Commercial Law* (Cambridge UP, forthcoming). I am grateful to Jim Rogers for discussing these points with me.

Instead of following this traditional model, many intellectuals and legal scholars assume that modernization means centralization. However, centralization is no more plausible for law than commodities. Central planning failed as a system of making commodities and law because the constraints upon information and motivation tightened as the economy became more complex. In other words, central planning failed as agency problems worsened. Solving agency problems in a modern economy requires internalizing norms and decentralizing law. Decentralizing law requires the adjudication of custom. The adjudication of custom requires a theory of the evolution of norms.

F. EVOLUTION OF NORMS

Sociologists sometimes use "norm" to mean "typical" or "modal" behavior, but I use the term to mean "obligatory behavior."[32] For a community to have a customary norm, it must achieve a minimum level of control over their behavior. Otherwise, the community does not have the customary norm in question.[33] A customary norm affects behavior when people internalize it. Internalizing a norm changes preferences in ways that I described as the "thickening" of self-interest. Consequently, a customary norm emerges in a community when it is internalized by enough of its members.

Why do some games evoke a sense of obligation in the players concerning the strategies that they follow?" I will sketch an answer using game theory.[34] Imagine a sequential game involving two players and two moves. The

32. My use of "norms," and understanding of them, is influenced by Georg Henrik von Wright. See his book *Norm and Action* (196-)

33. This conclusion, which is the core of the positive theory of law. A summary of the positive theory of law is in Ronald Dworkin, "The Model of Rules," *Taking Rights Seriously* (1977), chapter 2. The many refinements and criticisms of the positivist theory of norms need not concern us. This theory is vulnerable to the criticism that a norm might satisfy the positivist existence conditions in one community, whereas people in other communities regards it as thoroughly immoral. To illustrate, many tribes impose an obligation on their members to revenge the death of a relative, even though clan revenge seems abhorrent to most modern people. Thus critics have argued that a rule must satisfy certain minimal conditions of morality before it can be called a law, regardless of whether or not it satisfies positivist existence conditions. One of the grand, eloquent debates in jurisprudence concerned this subject. See Lon Fuller, "The Morality That Makes Law Possible", *The Morality of Law* (New Haven, Yale U.P.,1964), pp. 33-93, and "Positivism and Fidelity to Law — A Reply to Professor Hart", *71 Harvard Law Rev 630* (1958); H.L.A. Hart, "Positivism and the Separation of Law and Morals", *71 Harvard Law Rev. 593* (1958).

34. For a more complete development of this game, see Robert Cooter, op. cit. at endnote 25.

first player invests or does not invest. Subsequently, the second player cooperates or appropriates. Cooperation is productive, whereas appropriation redistributes the value of the investment. The first player will not invest unless he believes that the second player will cooperate. Therefore, the second player wants the first player to believe that he will cooperate, regardless of what he actually plans to do. Consequently, the second players will endeavor to signal "cooperation."

Now imbed this two person game in a market with many participants. The participants consist of many "first players" who want to invest, and many "second players" who want to find an investor. All second players endeavor to signal "cooperation." Since everyone follows the same signaling strategy, the game has a "pure signaling equilibrium."

A signal represents a player as following a particular strategy. A player who represents himself as following one strategy may actually follow another. Specifically, a player who represents himself as cooperating may actually appropriate. In a "mixed equilibrium," some players cooperate and others appropriate. The people who cooperate form enduring relationships and secure a modest payoff in most rounds of the game. The people who appropriate form temporary relationships (the investors exit immediately after appropriation) and secure a large payoff in a few rounds of the game. Appropriators receive no payoff in most rounds while they search for an investment partner. In equilibrium, both strategies earn the same average rate of return.[35]

More cooperation in the investment game will elicit more investment, which is productive and benefits all the players. Such external benefits, which everyone enjoys who plays the game, can be called "local public goods." Thus the investment game has an equilibrium in which the players signal that they will supply a local public good. The community benefits from local public goods, so people concerned with its welfare will want to increase their supply. These people will say that everyone ought to cooperate. Saying that everyone ought to cooperate, including yourself, may become necessary to signal cooperation. As explained, everyone signals cooperation, including the appropriators. Consequently, a consensus will arise in the community that people who play the game ought to follow a cooperative strategy.[36] This consensus will convince some people to internalize the obligation and inculcate it in young people. Thus a norm will arise. Generalizing, I formulate the *alignment theorem: A social norm will evolve*

35. By definition, an evolutionary equilibrium exists when all stratgies actively played earn the same average rate of return.

36. Notice that if *all* players say that everyone ought to cooperate, the fact that one player says it provides no basis for distinguishing him from anyone else. In other words, the communication carries no information. Even so, denying that everyone ought to cooperate would convey information that no one wants to transmit about himself.

in a community when private incentives for signaling align with a local public good.[37]

G. SOCIAL SANCTION

In my example there is a consensus about what people ought to do, although some people do not do it. In other words, the game has a pure signaling equilibrium and a mixed behavioral equilibrium. People create a local public good by doing what they ought to do. Consequently, the community gains when more people do what they ought to do. I will consider how sanctioning wrongdoers increase the supply of local public goods. An interesting fact about the game, which I will explain, is that individuals typically increase the supply of local public goods by punishing violators of the norm, but not by conforming to it themselves.

In a mixed behavioral equilibrium in the investment game, the strategies of cooperation and appropriation yield the same objective payoff. Since the payoff is the same, players may conform to the norm without internalizing it. I use the term "adventitious" to describe players who conform to a norm without internalizing it. In a mixed behavioral equilibrium, some players cooperate from principle, some players cooperate adventitiously, and some players appropriate. I will explain how these proportions change respond to internalization of the obligation to cooperate.

Assume that an equilibrium in the game is disturbed by someone who internalizes an obligation, stops appropriating, and starts cooperating. The decline in the relative number of appropriators increases the payoff to appropriation.[38] Consequently, one of the adventitious cooperators switches and begins appropriating, which restores the equilibrium. After these changes, the same number of people cooperate and appropriate as before. Thus the individual who internalized the norm did not change the behavioral equilibrium by conforming to it.

Now consider sanctions. Assume that punishing players who violate the norm uses resources. People who internalize the norm use some of their own resources to punish violators of it. People who externalize the norm free-ride on the enforcement efforts of others. What happens when an individual internalizes a norm and punishes people who violate it? Assume that an adventitious cooperator internalizes the norm. Before he cooperated adventitiously, and now he cooperates from principle. So the number of

37. See Robert Cooter, op. cit. at endnote 25. The alignment theorem can be distinguished into weak, strong, and very strong forms, depending upon whether the alignment of private incentives for signaling with a local public good is a sufficient, necessary, or necessary and sufficient condition, respectively, for the evolution of a social norm.

38. Otherwise the equilibrium is unstable.

people who cooperate and appropriate has not changed. However, suppose that he begins to punish appropriators. As a result, the payoff net of punishment falls for appropriators. This fall in net payoff causes some adventitious appropriators to stop appropriating and begin cooperating. Adventitious cooperators continue switching strategy until the payoff net of punishment equalizes for appropriation and cooperation. In the new equilibrium, more people cooperate and fewer appropriate. Thus the player who internalizes the norm changes the behavioral equilibrium by punishing violators of it, but not by conforming to it himself. In brief, adventitious players are marginal with respect to cooperation in a mixed behavioral equilibrium, whereas principled actors are marginal with respect to punishment.

H. COMMON LAW

In the investment game, internalization of a norm by the members of a business community increases cooperation, which benefits everyone. Cooperation increases because people who internalize the norm use their resources to sanction wrongdoers. However, the people who externalize the norm free-ride on the enforcement efforts of others. Consequently, the level of cooperation remains below the social optimum. Increasing cooperation requires devoting more resources to sanctioning wrongdoers. More resources for sanctioning wrongdoers can come from the state.

The investment game justifies the traditional conception of the common law. According to the traditional conception, courts *find* law, rather than making law. Courts find law by sifting norms that arise outside of the legal system and selectively enforcing them. Enforcement by the courts provides an authoritative statement of the obligation and a predictable sanction for its violation. Applied to the new law merchant, the courts should sift business practice to find norms that increase production by facilitating cooperation. When the courts find such a norm, they may observe that free-riding on its enforcement causes sub-optimal cooperation. In these circumstances, court enforcement increases the supply of a local public good.

Notice that this argument tracks John Locke's justification of the state.[39] According to Locke, people have natural rights that precede the state's creation. Enforcement of these rights is inadequate in the state of nature. Consequently, people make a compact to create the state and improve the enforcement of their natural rights.

Also notice that this argument solves a perplexing puzle about the economic analysis of common law. The economic analysis of law has demons-

39. See *Second Treatise on Civil Government.*

trated more consistency between the common law and efficiency than anyone anticipated when the intellectual enterprise first began in the 1960s.[40] However, judges seldom explicitly decide cases on grounds of efficiency. These facts raise the question, "What is the hidden hand that directs the common law towards efficiency?"

54 Judge-made law might evolve towards efficiency without judges aiming for it if inefficient laws are litigated more intensively than efficient laws.[41] Litigation competition could be the "hidden hand" that directs the common law towards efficiency without anyone consciously pursuing it. Several mechanisms could produce this result. First, inefficient laws might cause more legal disputes than efficient laws. Second, the legal disputes caused by inefficient laws might be more difficult to settle out of court than the legal disputes caused by efficient laws. Third, the decisions of trial courts might be appealed more often when they apply inefficient laws to cases. Fourth, the parties challenging an inefficient law might spend more on lawyers than the parties defending an inefficient law.

These four mechanisms tend to produce a negative correlation between efficiency and litigation. Unfortunately, a far more powerful mechanism undermines this correlation. A law is general in the scope of its application. Challenging a law affects everyone who is, or will be, subject to it. The effects of a new precedent spill far beyond the litigants in the case where it is set. Most plaintiffs capture no more than a small fraction of the value the new precedent creates and redistributes.[42] The fraction of a precedent's value

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40. Footnoting all the efficiency models would require footnoting almost the entire economic analysis of law. For more detail, sell either of these text books: Robert Cooter and Tom Ulen. *Law and Economics* (1988) or Richard Posner's *Economic Analysis of Law* (4th ed. 1992). Skepticism about the whole enterprise persists in some quarters, especially within the critical legal studies movement. Mark Kelman has argued in a series of papers that the economic analysis of law is ideologically motivated. See, for example, "On Democracy-Bashing: A Skeptical Look at the Theoretical and 'Empirical' Practice of the Public Choice Movement," *74 Virginia Law Rev. 199* (1988).

41. The legal system will circulate randomly through a variety of states, spending more time in the efficient states than the inefficient states. The legal system will not settle into the most efficient state unless it is "an absorbing state," meaning that the efficient precedent never gets repealed once it is established. For a precise mathematical discussion of these points, see Robert Cooter and Lewis Kornhauser, "Can Litigation Improve the Law without the Help of Judges?", *9 Review of Legal Studies 139* (1980); reprinted in Law and Economics, Volume 2 (The International Library of Essays in Law and Legal Theory, New York University Press, 1992), editors Jules Coleman and Jeffrey Lange.

42. This claim is the basis of Landes and Posner's argument that private dispute settlement creates too few precedents for efficient common law. See Landes and Posner, "Adjudication as a Private Good," *8 Journal of Legal Studies 235-284* (19). It is also the basis of the conclusion by Bailey and Rubin that "law will tend to evolve in a direction favoring that type of litigant

internalized by the parties affects them more than gains in efficiency from improving the law. Consequently, the intensity of litigation correlates more closely with internalization than efficiency.

These models look in the wrong place for the hidden hand that directs common law towards efficiency. Social norms compete with each other for peoples' allegiance. The more efficient norms tend to win the competition. If courts enforce social norms without regard for their efficiency, then the common law will evolve towards efficiency to the exact extent that social norms evolve towards efficiency. Furthermore, the speed of evolution towards efficiency will increase to the extent that judges selectively enforce efficient social norms. Thus the common law evolves towards efficiency because of competition in the "market for norms," not because of competition in the market for litigation.

I. CONCLUSION

Treating sanctions as prices brought science to law, which makes law more functional and less dogmatic. However, science has x-ray vision, not peripheral vision. Penetrating to causes obscures some surface facts. Treating sanctions as prices obscures the basic fact about morality: norms can be internalized. Internalizing occupational roles helps solve agency problems in a modern economy. To encompass internalization, decision theory must model the choice of who to be. Choosing who to be affects what you will prefer. Conflicts among possible selves are conflicts among alternative preference orderings. As self-interest thickens, acts express the choice of self Decision theory based upon thick self-interest would model psychological conflict and self-expression.

As people in business communities internalize occupational roles, business norms evolve. The evolution of the new law merchant provides the basis for decentralized law. Decentralized lawmaking proceeds by state enforcement of customs. Adjudicating customs requires a better theory of the evolution of norms. A better theory of the evolution of norms would predict when efficient social norms will evolve. Efficient social norms are typically under-enforced by informal means. Enacting these customs into law often increases efficiency by providing an authoritative statement of the obligation backed by certain sanctions.

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that is less numerous (or that can organize into a class of less numerous groups) with respect to a particular type of case." See Martin J. Bailey and Paul H. Rubin, "A Positive Theory of Legal Change," paper presented at the annul meeting of the European Law and Economics Association, Lund, Sweden, August 19-21, 1993.