

CHAPTER 9

The Role of Norms and Law in Economics: An Essay on Political Economy

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THE THREE-HOUR stretch of road between Hazaribagh and Dhanbad in eastern India is as desolate as it is beautiful. One winter evening, some half a dozen years ago, as I was traveling this route by taxi to catch a train from Dhanbad to get to Calcutta, I was lucky—or, I suppose, unlucky, depending on one's point of view—to be stopped by a road block created by a gang of youngsters wielding *lathis*¹ and swords. In front of us, also stopped by the ramshackle road block, was a truck, and some of the youngsters were talking to the truck driver. From the sight of some distant lanterns I figured that we were close to a village. My taxi driver looked very nervous as he waited for the youngsters to come to our car. He told me that they were hoodlums, collecting illegal money by threatening to beat up passengers and drivers. He asked me not to speak and to leave it all to him. Eventually, a bearded young man walked up to our car regally and asked me to lower my window glass. He spoke courteously and explained that he was collecting *rangdari* tax. He had a wad of papers in one hand (the other held a *lathi*) and he explained that after we paid the money, which, he added firmly, we would have to, he would even give us a receipt.

I had read about the institution of *rangdari* tax found to occur in some parts of India. The "tax" is an illegal collection made by gangs in remote rural areas where the hand of the law is lax. The reason I felt lucky about the incident was that this experience is very rare for an urban Indian, and it subsequently made me think hard about the meaning of law and norms, and I owe a part of this paper to the incident.

This is unimportant for my present paper, but I must finish the story. My taxi driver, despite the cold sweat, was not one to give up. He got into an argument and was soon asked to get down from the car and talk to the boss, who stood with others a little farther away. Several minutes passed before he returned, the bamboo road block was removed, and as we sped away toward Dhanbad, he explained how we got away without paying. His arguments in the beginning fell on deaf ears he said. Then he suddenly changed tack and explained that I was a visitor from Delhi who had come to see rural Bihar, and

it would create a very bad impression on me if I were forced to make a payment. This appeal to regional pride clicked and, like some visiting ambassadors, we were allowed to go without paying local dues.

There are several features of this little incident that shed light on the functioning of an economy and also cast shadows on our textbook models. First, what the youngsters were offering us was, at a certain level of abstraction, like any exchange. If we wanted our arms intact and heads not bruised, we would have to pay them some money. In other words, they were *selling* nonviolence. And most people, like the trucker ahead of us (and I, for that matter), thought it was a good bargain. A small sum of money in exchange for no bodily harm seemed well worth it. But note that what they were selling was what in most societies is treated as belonging to the buyer's endowment. If I wanted *my* arm unharmed, I would have to pay him. In textbook economics we usually treat individual endowments as beyond the reach of others. But in reality, individuals often encroach on each others endowments, selling to *i* what in most societies would be considered as belonging to *i*. This happens between powerful landlords and poor serfs; between big countries and small countries; between big corporations and small companies. Evidently, the theorem that individuals, left to themselves, lead to an efficient society, is predicated on the *assumption* that agents respect each other's endowments. But to the extent that they do not do so in reality, this claim that individual rationality is enough to create an efficient society is false or, at best, remains to be established.

The other matter on which the incident sheds light is the meaning of the law. Virtually all accounts in the Indian press have described the *rangdari* tax as illegal extortion. Yet it is impossible not to notice how analogous it is to a regular tax. It is not paid by people voluntarily but needs the threat of punitive action. The fact that the extortion was taking place so close to a village makes it plausible that it has some legitimacy in the eyes of the villagers.² In all likelihood a part of the money is spent on local village welfare, with the remainder being used by the tax collectors on themselves. This is analogous to the uses to which government tax revenue is put. In brief, the institution that I had chanced upon that evening was pretty much like a local government. It is considered illegal only because it commits acts that, in the eyes of what we consider the real government, are illegal, though in essence the actions are similar to the real government's own actions. Hence, as per common usage, the institution of the *rangdari* tax cannot be thought of as supported by the law and the threat of state penalty; it is supported by norms and informal threats. But what, really, is the difference between a law and a norm? There are several differences to be sure, but at some level they are indistinguishable from each other. The latter is a nontrivial claim and is one of the central theorems of this paper. It will be called the *core theorem*. It expresses a viewpoint that can have important influence on the way we conceptualize the

role of law in economics, as will be argued in a later section. It is not a theorem in the sense of geometry or even axiomatic economics, which can be mathematically proved, but a point of view to which I aspire to convert the reader through examples, arguments, and persuasion. It is formalizable, but only potentially so.

The core theorem and the discussion around it are related to the research in economics often called the new or positive political economy,³ and is part of the older "institutional economics." My method of analysis, relying on game-theoretic constructions, is similar to the method used in this new literature. But at the same time my central claims, embodied in and stemming from the core theorem, diverges from the view that is taken in the literature on political economy. Moreover, I do not share the confidence of this new literature, with which economists—ready with their median voter theorems and techniques of optimization—have rushed to explain the rise and fall of nations: why some dictators ruin nations and others bring prosperity, why one government loses the election and another one does not, and why democracies appear when they do and why they do not when they do not (hindsight being never too far away from these analyses). I do not think we are in a position to answer such large questions. But I know that a group of people all praising one another for their understanding of these questions and at the same time trying to outdo one another can create a "cult effect," where knowledge is replaced by illusion. This essay has a much more limited objective: to expose some flaws in our thinking that lie at the base of conventional economics and even the new political economy, and to provide the preliminaries for a large program that lies mostly ahead.

If I owe a part of my interest in this area of research to rural Bihar, I also owe a part to the Institute for Advanced Study, Princeton. I came to the Institute with a fledgling interest in power and the politics of oppression. I had argued in my paper "One Kind of Power" that we needed to move away from traditional dyadic economics to the economics of triads if we were to incorporate the role of power and influence in our models.⁴ During the year that I spent at the Institute, 1985–86, I was fortunate to have been able to collaborate with two remarkable economists, Eric Jones and Ekkehart Schlicht. We brought our respective skills to write a critique—in the original sense of the word "critique," that is, as evaluation—of the new institutional economics. In writing the paper that came out of this collaboration,⁵ I learned a lot about historical methods and institutional economics. We were touching on several issues of political economy, which was then far from being a discipline in vogue.

In the next two sections I shall comment on social norms, and law and economics. Finally, I shall try to present what I believe is a new approach to the study of political economy.

SOCIAL NORMS

Assumptions in economics have been at the receiving end of a lot of attention. They have been reviled for their unrealism, admired for their elegance, the mainspring of jokes, appreciated for their explanatory powers, and dismissed as untenable. All this attention, however, has been directed at the *explicit* assumptions, such as the transitivity of preference, or the convexity of technology. What has gone virtually unnoticed and therefore eluded criticism are the *implicit* assumptions. Yet the most untenable assumptions often belong to this category. One such assumption is the existence of social norms. Much of economics has been written up as if social norms do not matter. This is empirically false, as virtually all economists and certainly other social scientists will agree. What is more interesting is that it is, in all likelihood, *analytically* flawed as well. That is, a norms-free economics may not be possible. Hence, when we write up a model with no reference to norms and institutions, we are nevertheless using norms and institutions, but doing so unwittingly.

This is best illustrated by the act of exchange. According to the first principles of economics, two agents will exchange or trade goods if the following assumptions are true: (a) each individual prefers having more goods to less; (b) each person satisfies the law of diminishing marginal utility;⁶ and (c) the initial endowment of goods is lopsided, for example, one person has all the butter and the other all the bread. To many economists, (a), (b), and (c) are indeed sufficient conditions for trade to occur. What they do not realize is that these are sufficient only when the agents are already embedded in a certain institutional environment and characterized by adequate social norms.⁷ For one, exchange is greatly facilitated by the ability to communicate or, even better, to speak a common language. And given that language is after all an evolved social convention,⁸ trade and exchange are predicated on social conventions.

The importance of these implicit requirements for trade can be inferred from some experiments in economics, which were conducted for a different purpose. Experiments have shown that rats do prefer more to less—a fact that I suspected well before I read experimental economics. Furthermore, experiments have established that rats also satisfy the law of diminishing marginal utility or, more precisely, have convex preference. This was established by some innovative experiments conducted by Kagel et al. on white albino rats, belonging to the—this for the connoisseur—Wistar and Sprague-Dawley stock.⁹ So, rats do satisfy our assumptions (a) and (b). All that remained to be done to check the exchange hypothesis was to give different kinds of food to different rats, which would fulfill assumption (c), and see what the rats did. It seems some relentless researchers did just that.¹⁰ They presumably placed two rats at some distance, with each possessing a different food item. The researchers

discovered that, though these rats satisfied assumptions (a), (b), and (c), they did not, alas, indulge in trade and exchange. I feel I could have predicted this from my occasional encounter with rats, but it is anyway good to have these things experimentally confirmed.

Facetious though it may sound, the above account does amount to a very substantial critique of traditional economics. It shows that even in models which seem transparently free of any requirements of norms and institutions, that is not the case. Market-related activity, trade, and other economic functionings have to be embedded in institutions and social norms.¹¹ If we refuse to embed our models consciously, we will still be doing so, only unwittingly. And given that the latter is not such a wise approach, it is important that we recognize the role that social norms play and try to build these in consciously and in keeping with reality.

Before venturing to discuss different kinds of norms and critiquing mainstream economics, I want to put in a word of caution. That mainstream economics has ignored social norms is quite evident; one has simply to browse through a few random books of economics to verify the claim. That social norms are an important part of reality is also obvious enough. But these two facts are not reason enough for criticizing mainstream economics. Something can be an important part of life but not important for the research one is involved in. Indeed, for some of the core concerns of mainstream economics the social norm was not germane. Moreover, economists were wary of using a concept that was so vaguely defined that it could be used to explain almost everything, thereby falling into a tautological trap, a danger that has been pointed to by Solow.¹²

This justification for keeping norms out of our analysis, however, has grown weaker over the years. As economists have reached out to addressing larger questions, concerning political economy and law and economics, the silence on social norms has become less defensible. Moreover, with the rise in game theory, we have within our ambit methods for formalizing and giving more rigorous definition to different concepts of norms.

For the purposes of economic analysis, norms are best divided into three kinds: rationality-limiting norms, preference-changing norms, and equilibrium-selection norms.¹³ By a "rationality-limiting norm" I mean a norm that stops us from doing certain things or choosing certain options irrespective of how much utility that thing or option gives us. Thus most individuals would not consider filching another person's wallet even if it were lying unattended, not by speculating about the amount the wallet is likely to contain, the chances of getting caught, the severity of the law, and so on, but because they consider stealing wallets as something that is *simply not done*.

In traditional economics, the "feasible set" of alternatives facing an individual (from which the person can pick one) is defined in terms of technological or budgetary feasibility. Thus a consumer's feasible set is the collection of all

the combinations of goods and services that the consumer can purchase given his or her income. From the above discussion it should be evident that a rationality-limiting norm further limits the feasible set, because now certain alternatives may be infeasible to an individual not just because it is technologically infeasible (like walking on water) or budgetarily infeasible (like buying a Jaguar car) but because it is ruled out by the person's norms. Indeed, a person with norms may let go on options that could have enhanced his utility,¹⁴ and thus such a person would be considered irrational in terms of traditional economics. Basically, such norms limit the domain over which the rationality calculus is applied.

Elsewhere I have taken the line that we can, at least partially, understand why some norms exist and some do not, in terms of *evolutionary* stability.¹⁵ According to this argument, we do not see any society with the norm that one must not eat proteins simply because such a society would perish along with its norm. Similarly, we do not find any society where stealing anything from anyone is considered legitimate because such a society would soon be in complete chaos, become impoverished, and wither away.

On Forest Home Drive in Ithaca there is a bridge on which two cars cannot cross at the same time. When we were small we were told how in the Andes there are pathways along steep mountains that are so narrow that two persons cannot cross; and so when two persons found themselves face to face on one of these paths, the one with the quicker draw survived by shooting the other person and continued on his journey. In Ithaca a different norm is used. Cars pass in little convoys, three or four at a time, and the convoys from the two directions alternate. That is, after the third or fourth car ahead goes, one just stops and waits for an oncoming convoy and then starts once again. This stopping and waiting is against one's self-interest, so it is indeed a rationality-limiting norm, but the reason we find some norm of this kind and not the Andean custom of a shoot-out is that it is evolutionarily more stable. This is also the reason that the "Andes custom" probably exists nowhere. A society practicing this norm would not survive and so neither would the norm.

Some may argue that instead of thinking that such norms limit individual rationality, we can simply redefine our utility function so that what I described above as normatively infeasible is described as an option that gives a very low utility, perhaps negative infinity. But that would reduce utility theory to a sterile tautology. In reality, moreover, there are certain things we would love to do but our norms get in the way. We would not have to ask the lord to deliver us from evil if the evil gave us such disutility that it was no temptation to start with.

This does not mean that norms never change our preference or utility function. Certain norms do get internalized. There are many individuals whose religion requires them to be vegetarian, and they tell you that they find nonvegetarian food revolting anyway. More often than not, this is no coincidence; a

religious norm adhered to over a stretch of time often gets internalized so that one begins to actually prefer what the norm requires one to do. This can explain why one finds systematic variations in taste across regions and nations. What starts out as a norm or a custom can, over time, become part of one's preference. Such a norm may be referred to as a "preference-changing norm."¹⁶ Since such a norm works through an individual's preference, it can be ignored by traditional economics, which treats preferences as primitives. The only reason for being aware of this kind of a norm is that it can give us an understanding of how some of our preferences are formed.

This essay, however, is concerned with neither rationality-limiting norms nor preference-changing norms but rather with norms that have no effect on individual preference nor the feasible set from which a person chooses, but those that help coordinate actions across human beings. Consider the norm of driving on the right in the United States. It is true that this norm is additionally fortified by the law; but it is arguable that even if this were just a norm or custom and not the law, people would still drive on the right.¹⁷ This is because this norm, once it is in place, happens to be entirely compatible with self-interested behavior. In the absence of such a norm, there are at least two possible equilibria—everyone drives on the left or everyone drives on the right. The norm simply helps people to *select* an equilibrium. It is for this reason that I call such a norm an "equilibrium-selection norm."

According to this terminology, Akerlof's conception of caste is that of an equilibrium-selection norm.¹⁸ In my model of totalitarian states,¹⁹ people mimic loyalty to the totalitarian regime not because that is their preference but because the expression of loyalty is an equilibrium-selection norm. If others show loyalty to the regime it is in your self-interest to also show loyalty to the regime. Since this can be true for all individuals, the entire display of loyalty in some totalitarian states can be superficial, an exercise in mimicry from which no *individual* would want to deviate.

David Lewis's idea of a "convention" is also close to this kind of social norm. More recently, Cooter,²⁰ in discussing the connection between norms and law, has identified norms entirely with equilibrium-selection norms. He describes a "social norm" as an "effective consensus obligation," and he goes on to identify a consensus obligation with an equilibrium of a game.²¹

Since most of this essay will focus on norms of this kind, from here on the term *norm* should be taken to mean an equilibrium-selection norm, unless explicitly stated otherwise.

LAW'S ECONOMY

The standard view of law in economics and related social sciences is of something that changes the set of strategies open to an individual, or the "payoff function" of the individual. If the law does not permit emitting pollutants

into the atmosphere, then the payoff that I expect when I build a factory that freely emits pollutants into the atmosphere will be different from the payoff I would expect from the factory if the law of the land had nothing against pollutants. In the former case, in addition to the profits from sales, I would have to calculate the probability of being caught and fined and adjust that against my expected profit in order to get to the expected payoff.

This view is predicated on a conception of the economy as a game. In other words, each individual in the economy is supposed to have a (feasible) set of "strategies," or actions, open to him or her. The payoff that each individual, or "player," receives depends on the strategies chosen by all the players—often referred to as a "tuple of strategies." The payoff is a number that expresses the net utility that a player receives from the state of the world that emerges when every player has picked a strategy from his or her set of strategies. The rule that summarizes the payoff received by each player for every possible tuple of strategies is called a "payoff function." This is the view taken, implicitly or explicitly, in virtually all works of law and economics. It is an idea often associated with Pigou and referred to as the "Pigovian view"²² and is quite explicit in, for instance, Baird, Gertner, and Picker²³ and Benoit and Kornhauser.²⁴ It is possible to contest this view of the economy, but that is not my purpose here; indeed, it seems to me to be an adequate model for most purposes.²⁵ What I want to focus on is the role of law in such an economy.

As just explained, according to the traditional view, a law is something that changes the "economy game" by altering the payoff functions of players (or by limiting the set of strategies open to a player²⁶). In other words, according to this view, a new law typically alters the payoff that a person expects from certain actions. Thus Baird, Gertner and Picker observe, "We can capture the change in the legal rules by changing the payoffs."²⁷ And given that the payoffs are an integral part of a game, a law is treated as something that changes the game.

This has an immediate appeal. Consider a new law that raises the income tax rate. The payoff that one now expects to earn from eight hours of work will be less than what one would have earned from the same action or strategy earlier. Likewise with the example of the pollution law above. I shall, however, argue that, while this ubiquitous view of law serves well for some limited purposes, it is fundamentally flawed. The law needs to be understood very differently if we are to get a better grip on reality while building models of economics.

LAW AND ECONOMICS: CRITIQUE AND A NEW APPROACH

The standard view of the role of law in an economy would be right if it were the case that the economy game is one that is played only by the "nongovernmental" individuals in society. That is, if the police, the tax collectors, and the

judges were agents exogenous to the game, who mechanically went about doing what the law required them to do, then indeed for the other people in the society (that is, for the players of the game) a law would be something that determined the game by fixing the payoff function; and so a change in the legal regime would amount to a change of the game.

But in reality those who work for government—the police, the district judge, the tax collector, the bureaucrat, the individuals in the pollution control department, and so on—are also individuals with their own motivations, dreams, striving, and cunning. Hence they are also players and should not be treated as exogenous to the economy game. This fact, in itself, is now recognized in the new literature on economics and government.²⁸

What is not always recognized is that this throws a wrench in the traditional models of law and economics. Moreover, even those economists who recognize the significance of endogenizing the “law enforcer” balk at taking this idea all the way to its natural conclusion; and they tend to err on the side of the traditional approach in their instinctive moments.

Note that whether a particular law is there or not, the policeman’s, the tax collector’s, and the judge’s sets of strategies remain the same. And if everybody behaves the same way, whether or not the law is there, everybody must get the same payoff. Hence, the law cannot change the payoff function either.

Consider, for example, the case of antipollution law. *Whether or not the law is there*, the strategies open to the policeman include (a) arrest a person who emits pollutants and (b) not arrest a person who emits pollutants; the strategies open to the judge include (1) punish the policeman who arrests a person who pollutes the atmosphere and (2) punish the policeman who does not arrest a person who pollutes the atmosphere.²⁹ Now if—whether or not the law is there—the person, the policeman, and the judge behave the same way, then the person, the policeman, and the judge will get the same payoff. Hence, the game played by *all the individuals* in the economy is unaffected by the law.

If the enforcers of the law or the agents of the state automatically enforce the law, then a new law does affect the payoff function and therefore the game *played by the rest of the citizens*. But once everybody, including the enforcers of the law, are included in the game (as they should be), a law is nothing but some ink on paper. There being or not being such ink on paper cannot alter the game. This rather unusual conclusion, which is elaborated upon later in this section, is baffling at first sight. But this merely reflects the fact that the standard approach, though flawed, is deeply ingrained in modern social science thinking.

To digress for a moment, consider the new literature on rights and liberty, which expresses rights as game forms.³⁰ There has been much controversy about whether this is the correct way to describe rights. I would argue that, according to this conception of rights, a change in the structure of rights changes the sets of actions open to individuals and therefore changes the game.

But it is not clear why a new rights assignment will change what I *can* do, even though it may well change what I *will* do. I argue that granting a person, *i*, a right to do something, call it *x*, must mean that if *i* does *x*, then another person, *j*, will not have the right to do something (for instance, punch *i*’s nose). Of course, *j*’s not having the right to do something, in turn, must mean that if *j* does do that thing, then others will acquire the rights to certain actions (typically punitive actions against *j*) to which they otherwise would not have had a right.³¹ This is discussed in greater detail in Appendix B.

The above discussion may give the impression that law does not have any effect on society, that it is a chimera, but such an impression would be wrong. The law does not affect the payoff functions of the individuals or of the game, but it can influence the *outcome* of the game. It does so by creating focal points, and by giving rise to beliefs and expectations in the minds of the individuals.³² Thus, in the above example, the policeman can choose between (a) and (b) and the judge between from among (1) and (2), but the policeman may *believe* that the judge will choose (1) if there is no antipollution law in the state and (2) if there is an antipollution law in effect. Hence, this may prompt the policeman to choose (a) if, and only if, the law is there. This in turn may mean that no one will pollute the atmosphere if, and only if, there is an antipollution law in effect. Hence, the outcome of the game may well get influenced by the law. But note that the law works here entirely through its influence on people’s beliefs and opinions. A central thesis of this essay is that it cannot be otherwise. Law’s empire, tangible and all-encompassing as it may seem, is founded on nothing but beliefs.

Of course, we will need to check that a particular outcome is self-enforcing (that is, an equilibrium solution) before we can say that the outcome will occur given the law. But the important point is that a law *can* affect the *outcome*, and that in the final analysis, the law and the state are simply a self-supporting structure of beliefs and opinions. Hence, the order that one finds in very different kinds of collectivities—ranging from the totalitarian state to what anthropologists, in their zoological moments, call the acephalous society—are *self-enforcing* outcomes.

What is a self-enforcing outcome or a reasonable equilibrium solution for a game is itself a controversial question. Over the last two decades solution concepts have proliferated rapidly.³³ But it would be foolish to get drawn into that debate here. Hence, without further justification, we shall treat the set of *Nash equilibrium* outcomes³⁴ as the self-enforcing set.³⁵ So from here on, a reference to an “equilibrium” outcome is always to a Nash equilibrium.

Many games have the problem of there being too many Nash equilibriums. Consider a game in which you and another player will each have to choose one number (without letting the other player see what you are choosing) from among 3, 7, 9, and 100. If both of you choose the same number, each of you gets \$1,000; if you choose different numbers, neither gets anything. In this

game the following pairs of choices are the only Nash equilibriums: (3,3), (7,7), (9,9), and (100,100). If you were playing this game, your essential problem is to try to guess what the other player will do. What complicates the guess is that what the other player does will depend on what she guesses you will do. One way of guessing is to try to see if a particular strategy is salient or “focal,” and to employ it in the expectation that the other player will do the same. If such a salient outcome exists, it is called a *focal point*,³⁶ and predicting a focal outcome often turns out to be a good prediction. This method has no rigorous explanation but works through human psychology. In the above game, for instance, most human beings would choose 100. It is a large number, it is well-rounded, and somehow it stands out.

Nebulous though this method is, it works fairly well and has been used to great convenience. At Heathrow Airport there is an arbitrary place with a large sign above it saying Meeting Point. If you plan to meet a friend at Heathrow Airport and fail to decide in advance where to wait for the friend, then in this game there are millions of Nash equilibriums. As long as both of you choose the same place you have a Nash equilibrium. It does not matter where that place is. The value of the sign is that it creates a focal point among all the possible Nash equilibriums. You would typically choose to wait under the sign and so would your friend. There is no hard reason for doing that, but you would expect the other player to do so, and that becomes reason enough. Putting up the sign Meeting Point does not change the game that you and your friend are forced to play by virtue of having forgotten to decide where you will meet, but it nevertheless influences the outcome. The writing on the paper that constitutes law is like the signboard in Heathrow. In itself it is quite a vacuous thing, but it creates expectations in the minds of individuals as to what the others will do; it creates focal points, and thereby influences the outcome.

Suppose now the airport authority at Heathrow, in trying to be helpful and not have people walk too far, puts up twenty signboards saying Meeting Point at different locations in the airport. You may then decide that it is futile to wait under one of these (since it is not clear which one you should wait under), and remembering that your friend is a bookworm, and he knows that you know that he is a bookworm, and you know that he knows that you know that he is a bookworm, and so on, you may go to the store, Books Etc., and wait for him there. In anticipation of this, he may also choose to go the bookstall. Whether he does so or not, in this case the well-meaning signboards fail to influence behavior and the outcome of the game. This can happen with the law as well. Poorly drafted legislation or legislation that takes inadequate cognizance of individual incentives can fail to have effect on people's behavior or can have unintended effects by actually causing confusion. To avoid such poor quality legislation, we have to first understand how and when the law works in the first place. For that we have to cast aside the widespread view that law changes the payoff functions and, hence, the game.

Recall that social norms (of the equilibrium-selection variety) also are simply a mechanism for players to coordinate onto an equilibrium (or some outcome within a certain set of equilibriums). It follows that actions and behavior (and therefore outcomes) that are enforceable by law are also enforceable by social norms. Since an outcome that is enforceable by the law is an equilibrium, we can always imagine norms (which lead to beliefs) that sustain the same actions, behavior, and outcome.³⁷

To take an example, consider a society in which the law allows you to drive on any side of the road, but the norm is to drive on the left. Since we have seen that if such a law were there it would be enforceable, it follows that this norm is also enforceable. This is an easy example because it is empirically transparent. In some remote parts of India, the hand of the law is so weak that it is indeed the case that, in effect, there is no law about which side of the road to drive on. Yet people do drive on the left because once the norm is in place, there is no reason for one to violate it.³⁸

Obedience to a tyrant also is best explained along these lines, since no one really fears the hurt the tyrant can *himself* bring upon one. I have previously made use of a triadic model explaining this.³⁹ The subordinate's fear of the tyrant, based on what the subordinate expects other subordinates to do to him should he disobey the tyrant, is what Hume was talking about when he wrote: “No man would have any reason to *fear* the fury of a tyrant, if he had no authority over any but from fear; since, as a single man, his bodily force can reach but a small way, and all the farther power he possesses *must be found on our own opinion, or on the presumed opinion of others.*”⁴⁰ (The second set of italics is mine.)

This brings us to the central proposition of this paper, which I've called the “core theorem.”

CORE THEOREM: *Whatever behavior and outcomes in society are legally enforceable are also enforceable through social norms.*

This theorem has two immediate implications or corollaries.

FIRST COROLLARY: *What can be achieved through the law can, in principle, also be achieved without the law.*

SECOND COROLLARY: *If a certain outcome is not an equilibrium of the economy, then it cannot be implemented through any law.*

Let us begin with the first corollary and, in particular, with some examples. In India till fairly recent times, and in some parts even now, a widow was expected to lead a life of general abstinence: do not eat nonvegetarian food, wear black and white clothes, avoid close relationships with men, and so on. This social norm used to be adhered to very strictly in many parts of India. To an outside observer, unfamiliar with India, this would appear to be a practice enforced by law, just like in some Islamic states where the women are required

by law to wear the *chador*. But this appearance would be deceptive because there is no law that achieved this remarkable conformity in India. The conformity was achieved entirely through a system of sanctions and threats of ostracism, the threats themselves being given by individuals who feared that if they did not give such threats, they themselves would be ostracized. So this an example of behavior that we would expect to be caused by the law but is actually the result of social norms. The rules of caste are another example. The core theorem, in particular, the first corollary, challenges the myth that norms are somehow spontaneous and natural, while laws are intrusive and unnatural.

Turning to a different setting, consider a researcher who is given the task of finding out the extent to which the press is free in different countries. The typical thing this person will do is find out what kinds of legal restrictions each country places on its scribes. She may also check on more general laws and statutes, such as the First Amendment in the United States, which guarantees freedom of speech to individuals and, therefore, also to the press. It has been found that in some countries the state persecutes its critics even when the law does not disallow criticism; and so this researcher may go a step further and check the record of state persecution of journalists and television commentators. She would then somehow combine all this information to decide in which nations the press is the most free and in which nations the least. To most of us, at least at first sight, this seems like a reasonable procedure.

In light of the core theorem, however, it turns out that this method of research can yield seriously flawed results, because the method presumes that the only curb on press freedom can come from the nation's laws and the state. But the theorem tells us that what the state can do, individual citizens, going about their daily chores, can also achieve. So it is not enough to observe the law and state or governmental action.

One may try to rebut this criticism by arguing that there are practical limits to what we can study; so when we look for whether certain freedoms are guaranteed in a certain nation, it is only natural to study the nation's law and governmental behavior. Suppose we agree to this rebuttal. Then, of course, we have to use this criterion for all studies of a similar nature. Now suppose the researcher were asked to study the amount of freedom that the widow has in different nations. She would then have to say that the Indian widow is no less free than widows elsewhere in the world because she faced no legal or governmental restrictions on her behavior. This would then also be true of India several decades ago, when in some parts of the country the widow was expected to commit *suttee*—burn herself on the dead husband's pyre. Most of us would agree that the woman climbing on to the pyre was not, typically, committing a voluntary act. The voluntary act conclusion would be a folly stemming from the erroneous presumption that it is only the state that can curb individual voluntariness.

Newspapers and magazines come under all kinds of social—and in particular nongovernmental—pressures. If a newspaper criticizes a wealthy business lobby, it can face debilitating cuts in advertisements, and so it may feel compelled not to criticize the lobby. If it criticizes its government during an international crisis and the people of that nation are sufficiently nationalistic, it may face a boycott by general readers, and fearing this, it may decide not to criticize the government. Once these extralegal constraints are taken into account, certain rankings become ambiguous. Between, for instance, China and the United States, it may be relatively easy to conclude that the latter has a more free press, even without studying social control, because the state is *so much* more repressive in China; but between the States and India, the answer is less obvious. In terms of the *law*, the U.S. media are probably more free than the Indian ones; but the social and business sanctions seem to be greater on US newspapers and television channels. This is not just because of the pressures of political correctness, but there seems to be a wide recognition among corporations, lobbies, and power brokers in the United States that the control of opinion and information is an important ingredient for profit and survival. Even if my empirical conjecture about China, the U.S. and India is false, it still remains true that merely studying legal controls may be inadequate, not just for determining press freedom but the freedom of the widow or the low caste.⁴¹

Freedom of speech is similarly problematic. When you say that you believe that individuals should have the freedom to say what they want or what they believe in, the main problem, to my mind, is not the moral status or appeal of that statement but to understand what it means. If by the above declaration you mean that the set of feasible actions available to an individual should include his ability to make different speeches, then your commitment to free speech is pretty meaningless. It is based on the same flawed view of an economy that underlies some of the literature on rights that I have discussed above and examine in greater depth in Appendix B. Having a freedom or a right must be interpreted as other people not having certain freedoms or rights after you have exercised that freedom.⁴² And unless it is made at least partly clear what restriction one is willing to put on other people's freedom when guaranteeing a certain freedom to one person, the declaration that you believe in that freedom remains ambiguous.

An individual's freedom of speech can be curbed by the state; but it can also be curbed by the voluntary, atomistic actions of ordinary citizens.⁴³ Some societies are temperamentally more prone to sanctioning one another's speech and behavior, of being less tolerant of what one considers to be deviancy. If we are committed to maximizing the freedom of speech and recognize that such freedom is not just a matter of law but also social norms, we may have to contend with the even more difficult problem that arises from the possibility that one person's exercising of his or her freedom of speech can result in the curtailment of another's freedom.⁴⁴

Another example of how the meaning of “freedom” can quickly become complicated occurs in the context of labor markets. Most people believe that slavery is coercion but that modern labor markets are voluntary. Those who study developing societies agree that bonded labor is unfree but that wage labor is voluntary. But once one goes beyond contemporary, industrialized society to consider examples of labor markets from primitive societies or bygone eras, the dividing line between what is free and what is not is not so clear, as one encounters institutions that appear strange to the modern observer.⁴⁵ Moreover, on returning to contemporary markets, after such a journey, the dividing lines that had earlier seemed obvious also appear less sharp. It is true that in the light of the core theorem, individual freedoms become vastly more difficult to compute. But that cannot be reason enough for confining our attention to the law and the behavior of government when studying individual freedom.

Let us now turn to the second corollary. According to this, if we have a law, the adherence to which entails out-of-equilibrium behavior on the part of some individual, then such a law is doomed to failure; it can never be enforced. This is because according to the core theorem, the law can achieve only what a social norm can achieve. And since a social norm simply selects an equilibrium, no law can induce a non-equilibrium outcome.⁴⁶ Attempts to induce such an outcome would either result in the law being inconsequential or have unintended effects on the economy. Ellickson’s claim that there can be “order without law” is now easy to understand, as is the converse of that claim: disorder despite law.⁴⁷

Considering the core theorem, the question must arise, in what way is the law different from norms, since up to now we have shown how, in certain important respects, they look very similar? To answer this we have to recognize that the economy, described as a game, ignores a lot of information concerning prior beliefs and histories, which is a part of the real economy. In reality, even before a specific law is enacted there exists a predefined set of roles for various players concerning the way they should relate to the law, *whatever the law is*. The players are, of course, free to violate these rules, but they are nonetheless there. Thus the traffic policeman is supposed to follow the rule that he should stop drivers who violate the traffic laws. This instruction to the traffic police remains in force *no matter what the traffic laws are*. The ordinary citizen is supposed to follow the rule that he or she respects the orders of the traffic police.⁴⁸ The judge is supposed to follow the rule that he should punish the person who violates the law, and this remains valid no matter what the law is. Even if the speed limit is changed, the judge’s rule remains the same. These prior rules and institutions may be referred to as “quasi-laws,” “quasi-norms,” or as “standing orders.” The qualifier *quasi* reminds us that on their own they may not have any bite. The rule that the policeman should stop a car that breaks the speed limit is not an operational law till the speed limit is specified.

But once the speed limit law is specified, the quasi-laws come to life. The speed limit law thrown in with the preexisting quasi-laws is much more than a law that simply says that a driver must not cross 65 mph. It is a law (or a set of laws, if we want to emphasize its reach) that specifies behavior rules for various people—the driver, of course, but also the policeman, the magistrate, and also, frequently, the ordinary citizen (who, for instance, may not obstruct a policeman carrying out his duty). The role of quasi-laws is illustrated with an example in Appendix A.

Given that all modern societies have predefined rules or standing orders for people with respect to the law, which are independent of what the actual law is, this means that when new laws are enacted, the set of supporting activities and behavior by the various citizens do not have to be specified separately each time. It is this preexisting structure of rules and instructions, along with the expectations in people’s mind, that these will be adhered to as long as they are not against the adherer’s self-interest, which make it possible for the laws to be implemented. For any law, the full ramification of what it implies for individual behavior is enormous. Suppose Montana enacts a new speed limit legislation. This does not ask just drivers to behave in a certain way; it also asks traffic wardens to behave in a certain way, judges to behave in a certain way, and so on.⁴⁹ The existence of preexisting rules (and, therefore, expectations) for laws is what makes a law different from a norm. If the Montana speed limit were to be introduced as a *norm*, all the supporting behaviors by the various agents would have to be specified, since norms do not have the advantage of preexisting rules and expectations. So, though for each implementable law there is also a norm that would yield the same outcome, the full statement of that norm would be enormously complicated.

The histories of norms and laws are also different.⁵⁰ Usually (though not always) social norms appear through long processes of evolution. Similar acts repeated over time can become a norm. To quote Ullmann-Margalit: “Norms as a rule do not come into existence at a definite point in time, nor are they the result of a manageable number of identifiable acts. They are, rather, the resultant of complex patterns of behavior of a large number of people over a protracted period of time.”⁵¹ Even some very sharply defined social norms and customs, such as the caste system or eating habits of different peoples, have such distant and diffused origins that there may be no agreement among historians as to where they came from. The law, on the other hand, is normally a product of deliberate choices, with dates of their enactment frequently known. Of course there are exceptions. The laws that certain tribes follow often merge into what we think of as norms; even in modern societies there are laws that emerged from common customs. This is true, for instance, of English common law, and the U.S. practice of relying on interpretive principles and judicial rulings.⁵² Conversely, there are some norms which are deliberate decisions.

But norms are difficult to change, since norms do not have the paraphernalia of preexisting rules, which can be used to usher in a new norm. On the other hand, norms may well be more robust than the law, because just as most norms were not deliberately instituted, it is difficult to deliberately discard them.

CONCLUDING REMARKS

In the previous sections I have discussed how to correctly model the role of law in an economy. There are, however, situations where we may willfully choose to reject the correct method, just as economists often do a partial equilibrium analysis where, strictly speaking, they should be doing a general equilibrium analysis. Indeed, it is possible to view the standard literature on law and economics as something akin to partial equilibrium analysis. It *presumes* law-abiding behavior on the part of the law enforcement officers. Even in more sophisticated models that allow for bribery and other kinds of lapses, ultimately (and often implicitly) there is a layer of enforcement that is assumed to be automatic. This can work within limits, and if we are lucky, those who are assumed to do the job automatically actually find it in their interest to do so. But surely, instead of working with models that rely on our keeping our fingers crossed, it would be better to approach modeling law and economics as suggested here.

If one does adopt this approach to law and economics, it will have implications for several related areas of research, notably, the study of government and the state. In general, economists have been quite cavalier in modeling government. It has usually been treated as an exogenous agent or a puppet organization, carrying out the advice of economists (thereby providing a *raison d'être* for policy economists). Even when economists have gone beyond this, they have generally taken a simplistic or mechanical view of government.⁵³ This essay draws our attention to the fact that both the enforcers of the law and, for want of a better word, the enforcees need to be modeled together, as strategic agents, having volition and choice. Such a construction will not be easy and will not happen all at once, but it is a target worth keeping in mind.

APPENDIX A: LAW AND ENFORCEMENT

THIS APPENDIX illustrates formally some of the principles discussed in the main text. I proceed here entirely through an example.

For most games that economists talk about, it is possible to define a larger game by adding on to it the possibility of punitive actions after the end of the main game. Thus chess is a game, but at the end of a game of chess, I can sock my opponent in the nose, he can sock me back, and so on. So for every game G , we can define an "expanded game" G_E , which appends to G a string of punitive actions.

I shall consider a very simple game G . This game consists of one player, called player 1, who has to choose any action from the set $[0,1]$. His payoff function is as follows. If he chooses $x \in [0,1]$, then he gets a payoff of x . We could think of an action as the amount of pollution generated by him. This takes a value between 0 and 1. The more he pollutes the more profit he earns. Call this game G . If this was all there was, player 1 would pollute up to level 1.

Now consider the expanded game G_E . In period 0 of G_E , player 1 plays the above game G . In period 1 player 2 can choose between P (punish the other player) and N (not punish the other player). In period 2 player 1 chooses between P and N; in period 3 player 2 chooses between P and N; and so on ad infinitum. Suppose in period $t (\geq 1)$, player i has to move. Then if i plays P, player $j (\neq i)$ earns $-B$ (where $B > 0$) in that period and i earns 0; and if i plays N, both earn 0. In other words, punishment hurts and inflicting a punishment is costless and joyless (it will be interesting to modify this assumption). Both players have a discount factor of $\delta \in (0,1)$.

What we are interested in checking is how much pollution can be controlled through legislation. To keep the analysis simple, we shall assume that there is the following "preexisting quasi-law." This is simply a contingent definition.

At any time period $t \geq 1$, agent i 's chosen action will be called *illegal* if he chooses P (i.e., punishes the other player), though player j 's move at time $t-1$ was legal (i.e., not illegal) or he chooses N, though j 's move at $t-1$ was illegal.

In words, what we are saying is this: (a) It is illegal to punish someone who has done nothing illegal and (b) it is illegal to not punish someone who has violated the law. We can think of other kinds of quasi-laws—for instance, we may think of dropping (b).

This preexisting quasi-law has no bite till we specify a law regarding what constitutes an illegal move in game G , and that is the reason I refer to it as quasi-law. Consider a possible law, which I will call "the pollution law." In

period 0, if player 1 chooses any action greater than α , where α is a given number in $[0,1]$, then 1's action is *illegal*.

The pollution law, coupled with the preexisting partial law, is a well-defined law—let us call it a “legal system”—which allows us to classify every action in every play of the game as either legal or illegal. Given a play of the game, a person is described as law abiding if he or she makes no illegal moves.

Note that the legal system that we are considering is parameterized by α . We want to investigate for which α 's is the legal system enforceable in the sense that there exists a Nash equilibrium outcome where everybody is law abiding.

Observe that a new pollution law or, for that matter, a new legal system, leaves the strategy sets and payoff functions (and therefore the game) unchanged. As in the main text, the legal system *can* nevertheless influence behavior by affecting everybody's expectation about everybody else's behavior, as long as it is enforceable.

To check this, suppose both players are law abiding. In particular, let us suppose that 1 decides to play α in period 0 (i.e., the highest possible legal move) and be law abiding throughout. To check if this is an equilibrium, we have to verify that no one stands to benefit by deviating unilaterally.

If both are law abiding, 1 gets a payoff of α and 2 gets a payoff of 0. Clearly, 2 cannot do better through any deviation since 0 is the highest she can earn in this game. Consider 1's strategy if 1 decides to deviate from being law abiding. It is easy to see that the best deviation is to play 1 in period 0 and from then on to make only legal moves. That will of course invite punishment from player 2 (since she is law abiding) in period 1. After then, it is not worthwhile for player 1 to play P because that, and only that, will prompt player 2 to play P in the following period. Hence, if 1 deviates from being law abiding, 1's highest possible payoff is $1 - \delta B$. Thus, 1 will not deviate if, and only if, $\alpha \geq 1 - \delta B$.

It follows that the only pollution laws that are enforceable are ones that permit people to pollute up to some level at least as high as $1 - \delta B$. If $1 - \delta B > 0$ and the pollution law sets $\alpha \in [0, 1 - \delta B]$, then a behavior in conformity with the law cannot be enforced in any way. Since the law cannot change the game, a pollution level below $1 - \delta B$ is impossible in this society.

APPENDIX B: LIBERTY, RIGHTS, AND GAMES

THE LITERATURE on liberty and rights that emerged from social choice theory⁵⁴ has gradually moved to a representation of rights as game forms.⁵⁵ This representation of rights has been the source of some controversy. The discussion of norms and law undertaken here suggests a new line of criticism of this approach. According to the rights-as-game-form approach, every assignment of individual rights translates into a game; thus a change in rights is represented by a change in the game being played by the players, since rights determine the strategies available to a player. Thus if i does not have the right to steal j 's wallet, that option is typically omitted from i 's available strategies or actions.

It is arguable, however, that i 's not having a right to do something does not mean i *cannot* do that thing, so a change in rights should not be thought of as causing a change in the feasible set of actions. Stepping back from these academic debates, let us ask ourselves what it means to say: “Person i does not have the right to steal j 's wallet.” It means that if i does steal j 's wallet, then someone else (j or a policeman) has the right to take some punitive action (y) against i , which otherwise that person would not have the right to do. Thus, i having a right to action z means that if i chooses z , then someone else j will not have a right to some action y that punishes i . This interdependent character of rights is very similar to the law described in Appendix A. Hence, a rights structure can influence what happens in the game, but it does not do so by influencing the game itself.

The above idea of interdependence of rights has been stressed by several writers. Hart writes that “to have a right entails having a moral justification for limiting the freedom of another person and for determining how he should act.”⁵⁶ More pertinently, Lyons argues: “When others are under an obligation to me and threaten to default, there are actions I might appropriately take which I would not otherwise be justified in taking.”⁵⁷

To illustrate a rights structure of this kind, consider the game G_F in Appendix A. Think of action P as punching the other person in the nose or some such action to which no one has a right normally, but could acquire a right by virtue of the person in question doing something wrong or hurting one's right in the first place. Think of the two players in the game as neighbors and the actions open to player 1 in period 0 (given by the set $[0,1]$) as different levels of pollution from some activity in his backyard, which has a negative externality for player 2 but gives happiness to 1.

A *rights structure* can be defined by a basic right parameterized by α and other (contingent) rights. Let us suppose that by this society's values, 1 has the *right* to choose pollution levels up to α ; but no more. If he chooses a pollution level $s > \alpha$, then in period 1 player 2 acquires the right to choose P.

If, however, in period 0, 1 chooses $s \geq \alpha$ and in period 1, 2 chooses P, then in period 3, 1 acquires the right to choose P, and so on. More formally, this may be stated as follows.

At time $t \geq 1$, if it is player i 's move, we shall say that i chooses an action to which he or she *does not have a right* if that action happens to be P and if in period $t - 1$ agent j ($j \neq i$) had chosen an action to which he or she had a right (i.e., did not choose an action to which he or she did not have a right). This, coupled with the initial assumption that 1 in period 0 does not have a right to choose $s > \alpha$, where $\alpha \in [0, 1]$, defines a rights structure.

Now when the game is played we can evaluate the *outcome* as one that does or does not respect the rights structure. So in this formulation, it is not a game that can satisfy or violate rights, but it is the outcome that can be put to this test. And, as with equilibrium-selection norms and law, a rights structure can potentially be enforced only if it is such that the intersection between the set of outcomes that satisfy the rights structure and the set of equilibrium outcomes is nonempty. No amount of policing or state intervention can change this fact, since the enforcers are already a part of the game and cannot do anything that was not already a part of their strategy sets.

NOTES

This essay draws on my forthcoming book, *Prelude to Political Economy: A Study of the Social and Political Foundations of Economics*. In writing the essay I have benefited from the comments and criticisms of Patrick Emerson, Michael McPherson, Andy Rutten, Eduardo Zambrano, and an anonymous referee.

1. Rods, iron or wooden—I did not manage to find out which.
2. This fits in well with the "self-help" view of law so perceptively described by D. Black in "Crime as Social Control," *American Sociological Review* 48: 34–45. Thus while at one level collecting money by issuing threats is criminal, we must remember that "there is a sense in which conduct regarded as criminal is often quite the opposite." (p. 34) Black goes on to provide a variety of examples from different societies of "moral" crimes. A similar view from a historical perspective emerges from E. P. Thompson's classic essay on the moral economy of the crowd: "The Moral Economy of the English Crowd in the Eighteenth Century," *Past and Present* 50 (1971).
3. This is not to be confused with the "political economy" of the nineteenth century, which was the older name of economics till the advent of neoclassical economics.
4. This was later published in *Oxford Economic Papers* 38 (1986): 259–82.
5. K. Basu, E. Jones, and E. Schlicht, "The Growth and Decay of Custom: The Role of the New Institutional Economics in Economic History," *Explorations in Economic History*, vol. 24 (1987): 1–21.
6. Strictly speaking, what we need is the convexity of preference. But since that turns out to be equivalent to the law of diminishing marginal utility, if the utility function happens to be additively separable, I shall here use the more familiar condition.

7. See M. Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91 (1985): 481–510.

8. This view of language, which I adhere to, is not undisputed, but it has the respectability of age, dating at least as far back as to the writings of David Hume. Warneryd has formalized this point of view in terms of evolutionary game theory; see K. Warneryd, "Language, Evolution and the Theory of Games," in *Cooperation and Conflict in General Evolutionary Processes*, ed. J. L. Casti and A. Karlquist (New York: John Wiley, 1995).

9. J. H. Kagel et al., "Experimental Studies of Consumer Demand Behavior using Laboratory Animals," *Economic Inquiry* 8 (1975): 22–38.

10. Warneryd, "Language, Evolution and the Theory of Games."

11. I argue in my article "On Misunderstanding Government: An Analysis of the Art of Policy Advising," *Economics and Politics* 9 (1997): 231–50, that this is an implicit assumption in standard general equilibrium theory; and that once this is recognized it becomes possible to interpret the first fundamental theorem of welfare economics quite differently from what is usual.

12. R. M. Solow, "Mass Unemployment as a Social Problem," in *Choice, Welfare and Development*, ed. K. Basu, P. K. Pattanaik, and K. Suzumura (Oxford: Clarendon Press, 1995), p. 318.

13. See my "Social Norms and the Law," in *The New Palgrave Dictionary of Economics and the Law*, ed. Peter Newman (London: Macmillan, 1998). A more elaborate, though similar classification occurs in R. A. Posner, "Social Norms and the Law: An Economic Approach," *American Economic Review* 87 (1997): 365–69.

14. The norm of reciprocity, as described by R. Sugden, which involves self-interested behavior subject to some moral constraints, is a rationality-limiting norm; see his "Reciprocity: The Supply of Public Goods through Voluntary Contributions," *Economic Journal* 94 (1984): 772–87.

15. See K. Basu, "Civil Institutions and Evolution: Concepts, Critiques and Model," *Journal of Development Economics* 46 (1995): 19–33; and K. Basu, "Notes on Evolution, Rationality and Norms," *Journal of Institutional and Theoretical Economics* 152 (1996): 739–50.

16. An example of a preference-changing norm, along with its implications for economic policy, occurs in A. Lindbeck, S. Nyberg, and J. W. Weibull, "Social Norms and Economic Incentives in the Welfare State," mimeo, Stockholm School of Economics, 1997.

17. This explains why the police have to be vigilant in enforcing the Stop-sign rule or the speeding rule but not about drive-on-the-right rule. The first two are laws that are not in peoples' self interest (they may, of course, be in their *group* interest).

18. G. Akerlof, "The Economics of Caste and of the Rat Race and Other Woeful Tales," *Quarterly Journal of Economics* 90 (1976): 599–617.

19. K. Basu, "One Kind of Power," *Oxford Economic Papers* 8 (1986): 259–82.

20. R. D. Cooter, "Law from Order" (University of California, Berkeley, 1997, mimeographed).

21. Greif constructs an equilibrium-selection explanation of certain kinds of cultures and cultural beliefs that can explain different trading institutions: A. Greif, "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies," *Journal of Political Economy* 102 (1994).

22. J. M. Buchanan, "The Coase Theorem and the Theory of the State," *Natural Resources Journal*, 13 (1973): 580-94.

23. D. G. Baird, R. H. Gertner, and R. C. Picker, *Game Theory and the Law* (Cambridge, Mass.: Harvard University Press, 1995).

24. J. P. Benoit and L. A. Kornhauser, "Game-Theoretic Analysis of Legal Rules and Institutions," Economic Research Reports, #96-30 (1996), C. V. Starr Center for Applied Economics, New York University.

25. Dixit in his recent work on the political process in an economy also views the interaction between agents as a game. While not going into such a formal construction, Bhagwati and O'Flaherty nevertheless adopt a game-theoretic approach in which individuals who constitute government are also players with their own objective functions: A. Dixit, *The Making of Economic Policy: A Transaction-Cost Politics Perspective* (Cambridge, Mass.: MIT Press, 1996); and B. O'Flaherty and J. Bhagwati, "Will Free Trade with Political Science Put Normative Economists Out of Work?" *Economics and Politics* 9 (1997): 207-20.

26. One way of limiting the strategies open to a player is to assume that all the strategies are still available, but some of them give a payoff of negative infinity and thus would never be adopted. Hence, once we allow for the payoff function to be altered, there may be no need for separately assuming that the strategy set can be shrunk.

27. D. G. Baird, R. H. Gertner, and R. C. Picker, *Game Theory and the Law*, p. 15.

28. See J. Bhagwati, R. Brecher, and T. N. Srinivasan, "DUP Activities and Economic Theory," in *Neoclassical Political Economy*, ed. D. Collander (Cambridge: Ballinger, 1984); D. Friedman, "A Positive Account of Property Rights," in *Property Rights*, ed. E. F. Paul, F. D. Miller, and J. Paul (Cambridge: Cambridge University Press, 1994); R. L. Calvert, "Rational Actors, Equilibrium and Social Institutions," in *Explaining Social Institutions*, ed. J. Knight and I. Sened (Ann Arbor: University of Michigan Press, 1995); A. Dixit, *The Making of Economic Policy*; K. Basu, "On Misunderstanding Government: An Analysis of the Art of Policy Advising," *Economics and Politics* 9 (1997): 231-50; and R. Gibbons and A. Rutten, "Hierarchical Dilemmas: Social Order with Self-Interested Rulers" (Cornell University, 1997, mimeographed). An interesting attempt to apply some of these theoretical ideas to political events and phenomena occurs in R. H. Bates and B. R. Weingast, "Rationality and Interpretation: The Politics of Transition" (Harvard University, 1996, mimeographed). For an endogenous but evolutionary view of institutions, see A. Schotter, *The Economic Theory of Social Institutions* (Cambridge: Cambridge University Press, 1981).

29. The game, properly defined, would require specifying what the remaining strategies are, the sequence of moves, and other such details, but since I do not aim to analyze the game in any detail, it is all right to leave the description at this level of generality.

30. W. Gaertner, P. K. Pattanaik, and K. Suzumura, "Individual Rights Revisited," *Economica* 59 (1992): 161-78; A. Sen, "Minimal Liberty," *Economica* 59 (1992); and R. Deb, "Waiver, Effectivity and Rights as Game Forms," *Economica* 61 (1994): 167-78.

31. More formally, a "rights structure" is simply a specification of a subset of actions from among all the actions open to the relevant player at that information set. The interpretation is that the player has a "right" to choose an action only from the specified subset.

32. This point of view builds on the legacy of David Hume. In his essay "Of the First Principles of Government," Hume had puzzled about the sources of state influence on social and economic outcomes. Thus he wrote: "Nothing appears more surprising to those who consider human affairs with a philosophical eye, than the easiness with which the many are governed by the few." And he reaches the remarkable conclusion that those who rule do so only by the force of opinion: "It is therefore on opinion only that government is founded; and this maxim extends to the most despotic . . . governments, as well as to the most free and most popular." David Hume, *Essays: Moral, Political and Literary* (reprint, Indianapolis: Liberty Fund, 1987), p. 32.

33. See, for instance, M. J. Osborne and A. Rubinstein, *A Course in Game Theory* (Cambridge, Mass.: MIT Press, 1994).

34. A Nash equilibrium outcome of a game is a choice of strategy by each player (that is, a tuple of strategies) such that no individual can do better by *unilaterally* deviating to some other strategy. Thus, once a Nash equilibrium outcome is expected by all players, the outcome becomes self-enforcing.

35. Left to myself, I would prefer to use the coarser solution concept of "rationalizability," but for the present purpose it is simpler to rely on the much more widely used solution of Nash equilibrium. It is worth noting that in some situations, despite there being a rationalizable equilibrium and even a Nash equilibrium, there may be no reasonable way of predicting the outcome. See my "On the Nonexistence of a Rationality Definition for Extensive Games," *International Journal of Game Theory* 19 (1990): 33-44; and "The Traveler's Dilemma: Paradoxes of Rationality in Game Theory," *American Economic Review* 84 (1994): 391-95.

36. See T. C. Schelling, *The Strategy of Conflict* (Oxford: Oxford University Press, 1960).

37. For a real-life illustration of how norms and beliefs translate into action and policy, see P. Katzenstein, "Coping with Terrorism: Norms and Internal Security in Germany and Japan," in *Ideas and Foreign Policy*, ed. J. Goldstein and R. O. Keohane (Ithaca, N.Y.: Cornell University Press, 1993).

38. In this case, the norm is imported from the cities where it is the law and is enforced.

39. K. Basu, "One Kind of Power."

40. Hume, *Essays*, p. 34.

41. Bernstein's engaging study of the diamond industry makes it amply clear that the advice carries over even to the more microeconomic domain of specific industries and markets; see L. Bernstein, "Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry," *Journal of Legal Studies* 21 (1992): 115-57.

42. I am fully aware that this is a circular definition. But it is not meaningless for that reason, as is demonstrated in Appendix B.

43. G. Loury, "Self-Censorship in Public Discourse: A Theory of 'Political Correctness' and Related Phenomena," *Rationality and Society* 6 (1994): 428-61.

44. O. M. Fiss, *The Irony of Free Speech* (Cambridge, Mass.: Harvard University Press, 1996).

45. S. L. Engerman, "Coerced and Free Labor: Property Rights and the Development of the Labor Force," *Explorations in Economic History* 29 (1992): 1-29.

46. Following Leibnitz, Steiner has argued that for a set of rights to be implementable, it is necessary that the rights be "compossible," that is, that the set of social

outcomes or states where each of these rights are satisfied be nonempty. By the same argument, he would no doubt argue that for a set of laws to be implementable, a necessary condition is that they be compossible. Viewed in this light, the second corollary can be thought of as simply taking this argument further and claiming that for a set of laws to be implementable, the intersection of the set of outcomes that satisfy these laws and the solution set of the economy game must be nonempty. A similar extension is possible for rights, as illustrated in Appendix B. See H. Steiner, *An Essay on Rights* (Oxford: Blackwell, 1994), pp. 2–3.

47. R. C. Ellickson, *Order without Law: How Neighbors Settle Disputes* (Cambridge, Mass.: Harvard University Press, 1991).

48. Ask yourself why you would not stop driving if an ordinary civilian (perhaps mad), pretending to be a traffic warden, asked you to stop. The reason is not what we expect this person to do to us; neither the traffic warden nor the civilian would do anything directly to us. Moreover, both may report the license plate number to the police department. The difference is not in that. The difference is in how we expect others to react to this person. When the license plate number is reported to the police department, we expect very different kinds of actions on the part of the police, depending on who the report comes from, a traffic warden or a mad person.

49. Some of these preexisting rules may not even have the status of quasi-laws. They may be more in the nature of norms. Thus, for the successful implementation of a law, it may be important for the law to be embedded in a certain structure of norms. Cooter's claim that "state law builds upon preexisting social norms," though based on a different kind of argument, has some parallels to the position being taken here; see Cooter, "Law from Order," p. 2.

50. See Ellickson, *Order without Law*.

51. E. Ullmann-Margalit, *The Emergence of Norms* (Oxford: Clarendon Press, 1977), p. 8.

52. See J. Ferejohn, "Law, Legislation, and Positive Political Theory," in *Modern Political Economy*, ed. J. S. Banks and E. A. Hanushek (Cambridge: Cambridge University Press, 1995).

53. R. Hardin, "Economic Theories of the State," *Perspectives on Public Choice*, ed. D. C. Mueller (Cambridge: Cambridge University Press, 1997).

54. Among others, see A. Sen, "The Impossibility of a Paretian Liberal," *Journal of Political Economy* 78:1 (January–February 1970): 152–57.

55. Gaertner, Pattanaik and Suzumura, "Individual Rights Revisited," Deb, "Waiver, Effectivity and Rights as Game Forms."

56. H. L. A. Hart, "Are There any Natural Rights?" in *Rights*, ed. D. Lyons (Belmont, CA: Wadsworth Publishing, 1979), p. 19.

57. D. Lyons, introduction to *Rights*, p. 5.