

Law without Coercion: Examining the Role of Law in Coordinating Collective Punishment

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Abstract

Although most economic and positive political theory presumes the existence of an effective legal regime (protecting property rights or implementing legislative or judicial choices, for example), behavioral social science has devoted little systematic attention to the question of what constitutes distinctively legal order. Most social scientists take for granted that law is defined by the presence of a centralized authority capable of exacting coercive penalties for violations of legal rules. This unexamined presumption, however, leaves us with few tools in social science to answer key questions about the emergence and maintenance of legal order, particularly in settings with weak governance. In this paper we discuss several settings in which centralized coercive force is absent and yet social order relies on distinctively legal attributes and institutions. Drawing on a model developed in Hadfield & Weingast (2011), we use these settings to show how distinctively legal attributes and institutions work to coordinate decentralized collective punishment. We focus in particular on how legal institutions reduce ambiguity and solve incentive problems to support a decentralized equilibrium characterized by compliance with deliberately chosen rules. We thus sketch out how a social scientific account of law can help identify the institutions that support legal order in a wide range of settings that do not presume the existence of centralized coercion

I. Introduction

As Dixit (2006, p. 3) observes, “conventional economic theory . . . takes the existence of a well-functioning institution of state law for granted. It assumes that the state has a monopoly over the use of coercion” This assumption is made whenever we model property transfers in markets or analyze the incentives and welfare effects generated by instruments such as contracts, taxes or regulations. Compliance with property rules or contract obligations is presumed to rest on the capacity of a centralized state authority to impose coercive penalties for rule violations such as fines, damages or imprisonment. Social scientists conventionally presume that the absence of state coercion implies “lawlessness” or, more precisely, reliance on alternative non-legal methods of achieving economic governance and social order. Distinguishing law from social norms Ellickson (1992, 127), for example, defines law as rules that are enforced by governments rather than social forces.

The assumption that a legal order is, by definition, characterized by centralized coercive force to impose penalties for rule violations is natural when we are interested in analyzing central topics in economics, such as optimal tax policy or the design of contractual mechanisms to induce an agent or partner to exert efficient levels of effort or reveal private information. But identifying a legal order with a centralized, coercive authority leaves us with few tools with which to analyze systematically either the emergence or the construction of legal order as

an economic or political phenomenon. This is a particularly important limitation in the context of analyzing the relationships between law, development and the state. It is widely asserted that economic development and the stability and efficiency of market economies depends on the establishment of a reliable “rule of law” but what it takes to build the rule of law in a particular environment is still largely a mystery. The assumption in economics and politics that “law” is a system of rules established by governments with exclusive control over the legitimate use of force has led policymakers to focus law and development efforts on building reliable state legislatures and agencies, enacting law through these state entities, and building the capacity of state-controlled courts and regulators to enforce law in a neutral and non-corrupt way.

The well-functioning state undoubtedly has a very important role to play in the establishment and maintenance of legal order and the “rule of law.” This we do not dispute. But the taken-for-granted assumption among economists and positive political theorists that the achievement of legal order depends exclusively on the exercise of centralized state authority has, we believe, left large gaps in our understanding of the mechanisms by which legal order can be built and sustained. In particular, the conventional approach has paid little attention to the role of decentralized enforcement efforts—collective punishments—whereby penalties for violations of legal rules are delivered by the independent actions of individuals not acting in an official capacity. Although the power of reputation, boycott, retaliation, and shame are widely recognized, these enforcement mechanisms have by and large been classified as “informal” and opposed to the

“formal” development of law. But are there ways in which informal decentralized penalty mechanisms can be organized, harnessed or made more effective through formal law? If so, then securing legal order, at least in some spheres, may not necessarily require that governments secure centralized enforcement authority first.

In a recent paper, we have proposed a framework for analyzing the conditions under which recognizably legal order can be secured without presupposing the availability of centralized enforcement authority (Hadfield & Weingast 2011). We show that it is possible to secure an equilibrium in which behavior is patterned on the basis of rules (such as “deliver product by date X” or “do not share trade secrets with competitors”) in a very general setting based only on the deployment of decentralized punishment mechanisms, specifically collective punishment whereby agents can effectively punish rule violations by making individual decisions to participate in collective action (such as a boycott.) Conformity with desired rules can thus be achieved, we show, in the absence of a centralized enforcement authority. An equilibrium with rule compliance, however, is not achieved in a fully decentralized environment, however. Our model demonstrates a clear role for a formal institution to articulate rules to coordinate decentralized enforcement.

We argue that despite the absence of a centralized enforcement authority, the equilibrium we demonstrate can be reasonably called a legal order. The equilibrium satisfies basic axioms about what constitutes a legal (as opposed to

other form of social) order and displays characteristics that legal theorists have long suggested are constitutive of the rule of law.

In this paper, we provide historical and contemporary evidence of settings in which some form of recognizably legal order is achieved without centralized coercive authority. These settings range from Iceland and Europe in the middle ages to California during the late 19th Century gold rush, and from 20th C regimes of international trade under the WTO to modern contracting under the high novelty and high velocity conditions of the new web-based global economy.¹ In exploring these settings, we examine the role of decentralized enforcement and the role of centralized institutions that serve to coordinate decentralized enforcement. We focus on the presence of attributes that the model in Hadfield & Weingast (2011) suggests play a role in securing a stable equilibrium based only on such enforcement—attributes that ground our identification of the equilibrium as one of legal order. This evidence demonstrates that our theoretical analysis has empirical significance for the analysis of observed legal regimes and potential policy significance for the project of establishing the rule of law in environments with weak governance.

The paper is organized as follows. In Section II we give a brief overview of the model presented in Hadfield & Weingast (2011). We then present in section III examples of regimes that existed prior to the emergence of the stable nation state that achieved apparently legal order exclusively on the basis of decentralized collective punishment. Section IV then explores two settings in

1 In a parallel effort, Hathaway and Shapiro (2011) have recently used the examples of medieval Iceland and canon law to support the claim that international law is properly called “law” despite the absence of coercive enforcement by a centralized authority.

the context of the modern nation state in which formal coercive mechanisms are out of reach—international trade under the WTO and incomplete contracting in the new economy. Section V concludes with observations about the implications of our analysis for the social scientific account of law.

II. What is Law? A Coordination Account of the Characteristics of Legal Order

If we are not going to start with the assumption that a legal system is defined as a body of rules that are written and enforced by a government with effective coercive power, we face the problem of choosing an alternative basis on which to say that law exists in a given environment. If, for example, Medieval Iceland lacked any government enforcement authority (as we will see that it did), then what will it mean to assert that Icelandic society in the eleventh century had a legal system?

Although economists and positive political theorists have generally not explored such a question systematically (Kornhauser (2004) is an exception), legal anthropologists and sociologists have. Anthropologists have faced the question of determining whether pre-industrial communities such as foragers or hunter-gatherers possess a legal system and if so, how to identify its content. Hoebel (1954), for example uses the following definition to analyze the legal practices and rules among those he called “primitive man:”

A social norm is legal if its neglect or infraction is regularly met, in threat or in fact, by the application of physical force by an individual or group possessing the socially recognized privilege of so acting.
(Hoebel 1954, p. 28)

Sociologists have considered the question of the various forms of social order and the distinctive features of legal order. Weber defined legal order as order achieved at least in part by the probability that a “coercive apparatus” would be mobilized to impose a penalty, physical or psychological, in reaction to a norm violation simply because the norm is violated—and not to achieve any other material benefit. The “coercive apparatus” is understood by Weber to be “one or more persons whose special task it is to hold themselves ready to apply specially provided means of coercion (legal coercion) for the purposes of norm enforcement.” (Weber 1978, p. 313) Recognizing that “a consociation specifically dedicated to the purpose of ‘legal coercion’ . . . has not always been the monopoly of the political community” (p. 317), Weber explicitly takes account of the possibility that law may exist in environments that lack a state, and indeed may possess instances of “legal order” that co-exist with the state but are not enforced by the state.

We approach the problem of identifying law without presuming state enforcement by first placing it within this broader framework of distinguishing among different types of social order.² All human societies display various forms and degrees of social order, meaning behavior that is patterned in identifiable ways. People shake hands when they meet; they pay their bills; they stand an appropriate distance apart when speaking to a stranger. Order might come from many sources including biology, technology, morality and social sanction. If we

² Kornhauser (2004) proposes a similar exercise, developing a social-scientific account of law by placing the question within the broader framework of developing a social-scientific theory of governance structures. Kornhauser’s approach is in the spirit of ours but has not as yet proposed a particular set of criteria for distinguishing between legal governance and other forms of governance.

are to call the resulting order “legal”, we suggest, it should at least possess the following necessary characteristics. Note that we are not making the reverse claim: that any social order that possesses the following characteristics is legal; nor are we claiming that these characteristics are sufficient to identify an order as legal.

1. **Behavior is patterned on a *normative classification*, that is, the orderliness of behavior is with reference to a designation of some behaviors as preferred to other behaviors.** In the language of law, it is often said that some conduct is “wrongful” and other is “not wrongful”; behavior is patterned on this normative classification if there is reasonable empirical regularity with which individuals choose the “not wrongful” action over the “wrongful” action.
2. **The content of the normative classification is capable of being deliberately chosen, articulated or identified by an identifiable actor or entity.** A deliberately chosen classification is distinguishable from a spontaneous or emergent classification the content of which is determined only empirically by interactions in fact. The minimal appropriate distance to stand apart from a stranger, for example, is empirically determined; the appropriate type of clothing to wear in public may be determined by an identifiable entity, such as a religious leader, a legislature or common law judge. Hart (1961) emphasized the capacity to choose the content of norms as a defining feature of a legal system: his secondary rules for making (or changing) rules speak to this distinction between spontaneous order and legal order. According to Hart, procedures for “deliberately adapting the rules to changing circumstances” (p. 92) are essential to overcome the defect of societies based only on primary rules, where “the only mode of change in the rules . . . will be the slow process of growth, whereby courses of conduct once thought optional become first habitual or usual, and then obligatory, and the converse process of decay, when deviations, once severely dealt with, are first tolerated and then pass unnoticed.” (p. 92). The capacity for deliberately choosing the normative classification system that governs behavior is what makes law a potential vehicle for policy. Note that, as with Hart, we do not intend the concept of ‘deliberate’ to necessarily mean formal deliberative processes. The process could be a coin flip by a recognized official or the discovery/articulation of immanent or divine principles by a common law judge or religious leader, as well as legislative process and voting.

3. **Conduct that is oriented towards behaviors identified as preferred by the normative classification system is, at least to some degree, chosen in order to avoid incurring a cost or penalty.** The cost or penalty may be purely internal in the form of shame or discomfort at the disapproval of others, or it may be external in the form of the imposition of physical or material consequences. The distinction we emphasize is between systems that rely on punishment as opposed to reward. Although they are mathematically equivalent, there are important social differences between the encouragement of conduct through reward (paying people to drive on the right) and the discouragement of conduct through penalty (fining people who drive on the left.) Our approach here is consistent with the approach we see in philosophical, anthropological and sociological approaches. Hoebel's definition of law relies on physical punishment; Weber's on the deployment of a coercive apparatus. Hart, as with other legal philosophers, adopts the view that a valid law is a particular kind of rule, namely one that generates from an internal perspective an obligation of compliance; the legal nature of the rule generates a distinctive reason to comply with the rule, not to be indifferent to the failure to comply.³

Hadfield & Weingast (2011) models an environment that potentially meets these initial criteria so that we can say that we may be modeling a legal order. That is, we consider an environment that includes institutions that are capable of supplying a deliberately chosen normative classification of conduct and where the incentive for actors to choose behavior that the classification designates as preferred (we will say "not wrongful") is to avoid incurring a penalty. We do not, however, assume that an institution that supplies the normative classification is an institution also capable of imposing penalties for wrongful behavior. We model instead an environment in which the only way in which behavior classified as wrongful by an institution can be punished is through decentralized enforcement efforts. Specifically we look at a form of collective punishment whereby delivery of an effective penalty depends on independent and

³ Kornhauser (2004, p. 365) also emphasizes Hart's distinction between rules that are understood as standards of behavior and incentives, which are not.

simultaneous decisions made by individual (non-official) actors to punish a wrongdoer.⁴ We then ask the question: is it possible to secure an equilibrium in which wrongdoing, according to the classification of some institution, is effectively deterred on the basis only of this form of collective, decentralized, punishment? If so, we argue, we will have shown the potential to achieve a social order that meets the above criteria for a legal order and so may be properly characterized as a legal order.

To make this concrete, we assume a world with two buyers and one seller. (The model can be interpreted to involve any potential wrongdoer and multiple potential victims who are capable, if acting together, of delivering an effective penalty to deter the wrongdoer.) In each period over an infinite horizon, both buyers independently purchase goods or services from the seller under a contract where payment is made up front and delivery is made at a future date. The seller faces an opportunity to make a wrongful delivery of some sort—delivering low quality goods, for example, or delivering after a specified delivery date—with each buyer in each period. A buyer judges a delivery to be wrongful if the seller's performance destroys the buyer's expected value under the contract. A key assumption in our model is that this judgment is the product of what we call an *idiosyncratic logic* employed by the buyer. By idiosyncratic we mean that the

4 There is a burgeoning literature in behavioral economics and evolutionary game theory that considers the role of this type of punishment in generating cooperation. This literature sometimes refers to such punishment as “altruistic punishment” because punishers do not receive a direct material benefit for engaging in costly punishment. Fehr & Gächter (2002) show that people in laboratory settings are frequently willing to engage in such conduct; Henrich et al (2010) demonstrate this for several populations around the world. Boyd, Gintis & Bowles (2010) model the role of such a punishment strategy in the evolution of cooperation. Basu (2000) expressly considers the coordination of the actions of official enforcers. This literature is discussed in more depth in Hadfield & Weingast (2011).

buyer's reasoning is (in the extreme) inaccessible to others. In our simplest interpretation of the model, the idiosyncratic logic of a buyer simply reflects the buyer's profit as a function of how an agreed (and potentially complex) deal with the seller is performed. We assume a buyer can observe the details of the delivery made to the other buyer, but Buyer A does not know what destroys value for Buyer B and which B therefore judges to be a wrongful delivery (to B) and vice versa. This assumption captures an important and economically valuable form of heterogeneity, arising from the division of labor and specialization: Buyer A and Buyer B may be in different industries; they may employ different production methods; they may organize their relationship with the seller in different ways. Social welfare in this economy would be higher if the seller could be deterred from engaging in wrongful deliveries. But in the absence of a centralized third-party institution capable of punishing wrongful deliveries, any deterrence must be achieved through the delivery of decentralized punishments. Specifically, we assume that the buyers can punish the seller for wrongful deliveries by boycotting for a period. We further assume, however, that a unilateral boycott is insufficient to deter the seller; the seller will only be deterred from engaging in wrongful conduct vis-à-vis Buyer A, for example, if both Buyer A and Buyer B are expected to boycott simultaneously in response. This means that the only available form of punishment to secure deterrence is collective punishment.

Achieving deterrence therefore requires coordinating collective punishment in response to particular actions. This presents two essential

problems. First, because each of the buyers has an idiosyncratic logic for assessing wrongfulness in their own dealings with the seller, neither is able to determine when to boycott in response to a delivery to the other buyer. The buyers need a coordination device that tells them when to boycott. Second, because a boycott is individually costly, buyers need an incentive to boycott. (Note that unlike the law and social norms literature, as well as some recent legal philosophy literature, this is not a pure coordination game: coordination is not itself an incentive to participate.)

We show that there exists an equilibrium in this repeated game in which one of the available third party institutions supplying a normative classification system—what we call a *common logic*—can resolve the coordination and incentive problems and secure deterrence of actions that are deemed wrongful by the common logic. Thus the equilibrium satisfies the minimal criteria we suggest are necessary (but not sufficient) to reasonably identify social order as legal order: behavior is patterned on the basis of a normative classification and avoidance of behavior deemed wrongful by the classification is based on an incentive to avoid punishments incurred by wrongful conduct.

Moreover, as we investigate the characteristics of that equilibrium, we see that it possesses characteristics that are generally thought by legal scholars and philosophers to be distinctively legal. In particular, we argue that the equilibrium we have identified is characterized by the following attributes):

- *Generality*: the common logic is formulated in terms of principles that produce determinate classifications when supplied with particular facts; classifications are not completely context-specific

and thus can be predicted ex ante conditional on factual assumptions

- *Qualified universality*: the common logic addresses the relationships and interests of all those who are necessary to effective collective punishment
- *Long-range stability and prospectivity*: the common logic will be stable over a long enough horizon that supporters of the system can be reasonably confident that their interests will be addressed if and when they might be the beneficiaries of the system and the rules will not be changed retroactively if they themselves become involved in a dispute, whether as perpetrator, victim, or punisher.
- *Public accessibility*: the common logic and its reasoning will be available to all
- *Unique and clear classifications*: the common logic will be able to uniquely classify even complex behavior and circumstances as clearly either wrongful or not
- *Impersonal reasoning*: the common logic will be independent of the identity of the person applying the classification scheme
- *Open processes*: the process of determining classifications will be open to the introduction of private information and the integration of idiosyncratic reasoning into the common logic
- *Authoritative stewardship*: the elaboration of the classifications and reasoning of the common logic will be under the stewardship of an identifiable entity capable of resolving ambiguity and uncertainty with finality

These attributes bear a close relationship to the criteria identified with a legal order by Fuller (1964) and with the rule of law by Raz (1977).⁵

Because the equilibrium we identify meets our minimal criteria for designating social order as legal order and because the equilibrium is further characterized by a rich set of attributes that most observers would associate with our understanding of “law” and “the rule of law”, we call the equilibrium a legal

⁵ Fuller argues that for a set of rules to constitute a legal system the rules must possess the following characteristics: generality, clarity, stability, prospectivity, promulgation, non-contradiction, feasibility of compliance, and congruence between announced and enforced rules. Raz generates a similar list, but argues that these attributes are not necessary for a system to be identified as legal, only for it to be identified as achieving the desirable qualities of the rule of law.

order. The common logic supplied by a third party institution, including the procedures used to reach classifications such as the openness to hearing arguments and factual presentations from parties and the design of a process for ultimately final resolution of ambiguous classifications (such as a judicial hierarchy), constitutes what we can call a legal system.

The contribution of our model is not primarily in proposing a naming convention for what counts as a legal order. The contribution lies instead in our focus on a regime that lacks a centralized enforcement agency. This allows us first to show that a recognizably legal order can be supported exclusively by decentralized collective punishment. Perhaps more importantly, however, we are also able to show that *the distinctively legal attributes of the resulting equilibrium legal order are attributable to the assumption that punishment is provided exclusively through decentralized collective punishment*. Each of the attributes we identify plays a role in resolving either the coordination problem or the incentive compatibility problem facing the reliance on decentralized collective punishment.

Consider the coordination problem first. The common logic serves as a coordinating device by providing a publicly accessible, clear and unique classification of conduct based on impersonal reasoning. Either buyer, observing the details of the seller's performance of a contract—whether a contract with itself or the other buyer—can determine the classification of that performance by the common logic. The common logic reaches a unique classification for any performance and thus both buyers receive the same signal about whether to

boycott or not. Moreover, that they both see the same classification is common knowledge. Hence, provided they have concluded that the other buyer has an incentive to contribute to collective punishment, both buyers can predict that if they boycott the wrongful action, the other buyer will boycott as well.

Furthermore, because it is common knowledge that the seller can also access the common logic, implement the same impersonal reasoning, and make this prediction, the buyers can predict that the seller will avoid performances that trigger a collective boycott.

A key feature of the common logic helps to ensure that the logic can perform this coordination role. We refer to this as *authoritative stewardship*. By this we mean that there is a single identifiable institution whose responsibility it is to resolve any ambiguity or uncertainty about the classification reached by the common logic. This serves to ensure both uniqueness and common knowledge of uniqueness. Suppose the conduct in question is particularly novel or complex, requiring the elaboration of a general principle in the context of previously unseen facts. For the common logic to continue to perform its role in coordinating boycotting behavior (and hence expectations about boycotting behavior), it must be that both the buyers and the seller recognize that the elaboration of the logic is the responsibility of the steward of that logic. The logic, in a sense, belongs to the institution, and it is common knowledge that this is the authoritative and final means of resolving ambiguity in the logic. The distinction is thus made between a fully public system of reasoning—such as

mathematics—and a stewarded system of reasoning—such as the reasoning employed by a common law judiciary.

Other features of the common logic help to resolve the incentive compatibility problem. In our model, the incentive to participate in collective punishment is to secure the benefits of the coordinated equilibrium in which the seller is deterred from making wrongful deliveries. This benefit is enjoyed by an individual buyer only if the common logic classifies as wrongful conduct that the buyer judges, according to its idiosyncratic logic, to be wrongful. The concordance between the common and the idiosyncratic logic need not be perfect, but the two logics must be sufficiently convergent that the buyer is better off in the coordinated equilibrium with some deterrence than the uncoordinated equilibrium with none. As we show formally in Hadfield & Weingast (2011), by participating in punishment activity, an individual buyer signals to the other buyer and the seller that the common logic that coordinates deterrence is or continues to be sufficiently convergent with its own idiosyncratic logic to make continued coordination valuable.

The resolution of the incentive problem thus requires that each buyer be able to assess the value of future coordination under the common logic, that is, to determine how often the common logic will classify as wrongful seller performances that the buyer judges to be wrongful (because destructive of buyer value relative to contract expectations.) As with the coordination problem, this requires a clear, accessible reasoning scheme that is impersonal in the sense that its classifications do not depend on the identity of the individual who is

implementing the reasoning. The common logic must be universal in the sense that it applies to both buyers' relationships with the seller. (We call this *qualified universality* because the common logic does not have to address the interests and relationships of those who are not necessary to the achievement of effective deterrence; the common logic in our simple setting might, for example, ignore the interests of the seller.) To allow a buyer to assess how the common logic might be of benefit, the common logic will have to consist of general principles that the buyer can elaborate on the basis of its private information about the nature of the facts and circumstances that would be relevant if the buyer experienced a seller default. It is also likely in a complex world that the common logic will possess open processes for elaborating general principles, allowing the buyer to introduce privately known facts and idiosyncratic reasoning about why those facts should result in a finding of wrongfulness under the common logic. With such openness, a system can achieve higher levels of convergence between idiosyncratic and common logic and hence is more likely to be adopted and remain stable over time. Finally, the common logic will have to be stable for a period of time sufficient to allow the buyer to recoup its upfront investment in costly punishment to signal participation.

The virtue of our model, then, is that it provides a positive basis for predicting that an equilibrium in which the deterrence of wrongful behavior is supported exclusively by decentralized collective punishment is likely to possess attractive normative characteristics frequently associated with the rule of law.⁶

⁶ We note that Kornhauser (2004) suggests that a social-scientific concept of law would treat law as a term of commendation for a governance structure.

Indeed, relaxing the coordination or incentive constraints on the equilibrium—endowing the institution that supplies the common logic with sufficient coercive force to deliver its own penalties—would seem to suggest that at least some of these attractive and distinctively legal normative characteristics (such as universality or open processes) might not be present at all. If we took the conventional and unexamined assumption of law and economics and positive political theory seriously—the classification institution also possesses a monopoly on the exercise of legitimate force—then any limitations on the exercise of that force might rest only on normative commitments and not positive incentives. Of course, a tyrannical institution might be overthrown by the citizens it purports to govern; but this merely emphasizes our point about the importance of decentralized participation in the punishment system: even if it appears that an institution possesses a monopoly on force, often that monopoly depends on the cooperation of individuals. If so, then the problems of coordination and incentive compatibility continue to exercise discipline on the nature of the governance structure.

In the remainder of this paper, we explore the role of collective punishment in a collection of cases in which arguably there is no centralized force capable of enforcing legal rules. We use these cases for two purposes. First, we offer them to establish the empirical claim that recognizably legal systems based on decentralized collective punishment have existed historically prior to the consolidation of nation states and continue to exist even in the context of established states. Second, we use these concrete examples to show

that these legal systems appear to display the attributes we have identified and these attributes can be understood in light of their role in resolving the coordination and incentive problems facing decentralized collective punishment.

III. Historical Examples: Before the State's Power to Enforce

A. Medieval Iceland.

Medieval Iceland was a bloody place. But the age of blood feuds was also an age of extensive and complex laws and litigation (Bryce 1901, Miller 1990).⁷ Shortly following settlement by the Vikings, the first general assembly, known as the Althing, was held in 930 at Law Rock. Here, freemen assembled every year to vote on rules and, more importantly, hear lawsuits “argued with an elaborate formality and a minute adherence to technical rules far more strict than is now practised anywhere in Europe” (Bryce, p. 274). Lawsuits were argued on the basis of both customary rules and those generated at Law Rock. They were heard by ad hoc panels of judges selected by the Chieftains of the individual Things that made up the Quarters into which the Republic of Iceland was divided. Individual Things might hear disputes throughout the year; the annual Althing decided disputes that transcended the capacity or authority of the individual Things. Judges at the Althing were drawn from all the Things of the Republic.

Despite elaborate procedures for litigation, the Icelandic system had no centralized authority to enforce its rules. Again according to Bryce,

There was no police, no militia, no fleet, no army. . . Such State organizations as existed came into being for the sake of deciding lawsuits.

⁷ Friedman (1979) was the first to draw attention to the example of Iceland as a legal system not dependent on government authority for enforcement in the modern law and economics literature.

There it ended. When the decision had been given, the action of the Republic stopped. To carry it out was left to a successful plaintiff; and the only effect a decision had, so far as the Courts were concerned, was to expose the person resisting it to the penalties of outlawry—that is to say, any one might slay him, like Cain, without incurring in respect of his death any liability on the footing of which his relatives could sue the slayer. (281)

In fact, the only government official in the entire Icelandic republic was an individual known as the Law Speaker. He was elected at the Althing to a three-year term and paid out of public coffers. His job was, however, not to adjudicate disputes. His sole duties were to memorize and recite at the Althing the entirety of the law, composed of both customs and legislated rules, to answer any queries from potential litigants about the law, and to serve as the only person recognized as having the ability to declare with finality the content of the rules in the event of uncertainty in a court proceeding.

The medieval Icelandic system is a clear, almost canonical, example of what it means to have law without a centralized enforcement authority. It would be odd to describe this system as a non-legal regime given the orderly reliance on rules and formal adjudication by particular officially designated individuals—freemen chosen by the chieftain of the “Thing” to which they had decided to show allegiance—who reached authoritative judgments about whether particular acts constituted rule violations or not. Yet any penalties associated with rule violation arose exclusively from individual decisions to participate in—incur the costs of—punishment. And indeed the Icelandic system clearly satisfies our axioms about what may constitute a legal system: behavior was at least somewhat organized on the basis of a normative classification that could be deliberately articulated by the Law Speaker and chosen by the Althing.

Consider how punishment worked in this system. If a person was declared to be in violation of the republic's customary or legislated rules by a court—by stealing sheep, for example, or murdering someone—appropriate compensation was announced by the court. If the compensation was not paid, then the violator was declared either a lesser or greater outlaw. A lesser outlaw lost all rights in his property and was banished from the Republic for three years; a greater outlaw, lost all property rights, was banished permanently, and could be killed by anyone with impunity. Once declared an outlaw, anyone might punish the offender unilaterally—taking the offender's property or killing him, for example. Although this system of punishment appears to rest on unilateral action, we argue that in fact it is an example of a regime based on decentralized collective punishment subject to both coordination and incentive constraints.

The coordination problem becomes visible in this system when we consider how the rest of the community responds when the offender is attacked. Do they classify the retaliation as wrongful or not? If wrongful, then the person carrying out the unilateral punishment is at risk for retaliation himself. If not, then he can carry out the punishment without risk to himself. This is, in fact, what it means for the offender who does not pay the required compensation to be declared an outlaw: "anyone might slay him, like Cain, without incurring in respect of his death any liability on the footing of which his relatives could sue the slayer" (Bryce, p. 281). Retaliators thus want to ensure that there is coordination in the community at large on what constitutes authorized retaliation; that in turn requires coordination on what constitutes a rule violation and cause for a decree

of outlawry in the first place. Those who do not retaliate against retaliators, in effect, participate in this punishment, making it a form of collective punishment. In non-litigated cases, individuals contemplating the operation of this system would have been able to look ahead to how the system would treat particular events—whether they would be judged to be wrongful and whether, as a result, a potential enforcer would be (reasonably) safe from the risk of further retaliation if punishment was imposed. Without coordination on the classification of retaliation as authorized or not, there could not be as much confidence as there apparently was on the deterrence effect of decentralized punishment.

The institutional features that helped to resolve the problem of coordination in the service of supporting decentralized collective punishment are especially clear in the Icelandic case. That the only official in the system is dedicated to providing a publicly accessible and final statement of the content of the rules speaks to the centrality of this function in the maintenance of legal order. (H.L.A. Hart observes that “the history of law. . . strongly suggests that the lack of official agencies to determine the fact of violation is a much more serious defect” than the lack of official agencies to sanction violations and “many societies have remedies for” the problem of ambiguity before they have remedies for the problem of sanctioning (Hart 1961, 93-94).) Consistent with our model suggesting that individuals will be regularly interested in determining how the common logic classifies particular actions—in order to avoid committing a wrong or to determine whether punishment is warranted—the Law Speaker’s duties specifically included an obligation to recite the rules publicly and to respond to

any queries posed to him about the rules. The Law Speaker can thus serve as a quintessential example of what it means for an institution to exercise *authoritative stewardship* over the common logic.

Other features of the Icelandic regime can be understood in terms of their role in resolving the incentive compatibility problem. Although adjudication was performed by ad hoc groups of judges appointed to resolve particular disputes, decisions were not ad hoc, varying in ex ante unpredictable ways with the facts and people involved. Legal rules and reasoning were expressed in general terms. Miller (1990, p. 62) recounts, for example, a law declaring that “It is prescribed that there shall be no such things as accidents” but that “if a man does worse than he intends to do and damage [to livestock] results from his clumsiness, that is not punishable at law and he shall make amends for the damage within two weeks time as it is evaluated by five neighbors. Otherwise it shall not be judged an accident.” A generally stated rule like this indicates to the person who invests in punishing the person who fails to make amends for damage done to a neighbor’s livestock can do so in the confidence that the rules about accidents will apply to him in the same way if he suffers uncompensated damage in the future.

The incentive to help the wronged neighbor to punish was also supported by the stability and prospectivity of the Icelandic rules. In this system, leaders could not emerge at random times from a meeting and announce a new set of rules—whether for sincere policy reasons or to achieve corrupt objectives or to show favor to particular people involved in a dispute. Instead, the rules were

either derived from custom, which is inherently slow to change, or they were legislated at a public event that was known to occur only at a regular and specified time during the year—the annual meeting in mid-summer at Law Rock known as the Althing. This was not complete protection against change but it gave a basis for Farmer A’s reasonable expectation that if Farmer A helped this year to punish the trespasser who damaged Farmer B’s livestock, the same rules would be in place three years hence to generate an incentive for Farmer B to help out Farmer A if A suffered similar harms. The stability and prospectivity of Iceland’s general rules also gave A a basis to feel reasonably confident that his participation in punishment on B’s behalf today would not later be deemed a wrongful act itself by a change in the rule that authorized retaliation at the time he decided to participate.

The Icelandic rules also displayed the use of impersonal reasoning. Ad hoc courts were composed of groups of individuals; this implies that the rules were expected to be capable of interpretation and application by abstract individuals in consistent ways. Even the designation of a single individual with special authority to resolve uncertainty about the content of rules—the Law Speaker—demonstrates the reliance on impersonal reasoning. For the Law Speaker was elected only to a three-year term, indicating that the content of rules was capable of being articulated by anyone who might be chosen for that office and not dependent on the reasoning of a particular person.

The violence of Viking society puts the importance of these institutional attributes—the articulation of general, stable and prospective rules and the

creation of an authoritative steward to publicly resolve ambiguity about the rules and ad hoc groups to apply impersonal reasoning—into sharp focus. In the absence of a centralized authoritative force such as an army or police force and in the presence of ambiguity or instability about what counts as justified violence and what does not, violence seems far more likely to spiral out of control. Ambiguity about such judgments is likely to plague a system based only on emergent social norms. An unwillingness to channel violence to track a system of rules is likely to characterize a society in which individuals—even powerful individuals—announce ad hoc judgments according to poorly communicated, unstable or highly personalized criteria. Icelandic society was not close-knit; freemen lived fiercely independent lives only loosely affiliated with a Thing headed by a chieftain who exercised little coercive power over his Thingmen (Miller, pp. 21-28). Such an environment is unlikely to spontaneously develop unique shared classifications of behavior across the myriad circumstances that might breed conflict. The emergence of a formal institution—the Law Speaker—for resolving ambiguity, formal institutions—ad hoc courts—for applying rules based on impersonal reasoning and a formal institution—the Althing—for publicly designating general rules in a stable and slow-changing way thus seems to indicate a critical shift in the mechanism by which Iceland achieved some level of social order. We argue that the adoption of these institutions is usefully identified as a critical step in creating legal order, despite the absence of a centralized coercive authority.

B. The Medieval European Law Merchant.

Medieval Iceland is a sharp but somewhat esoteric example of a legal order based on decentralized collective punishment. But it is not the only place that we can find legal order without fully centralized enforcement systems during the Middle Ages.

Throughout the known world at this time, the Commercial Revolution was getting underway with the rapid expansion of long-distance trade. With this expansion came the challenge of securing the terms of commercial transactions, not among a relatively homogeneous group of migrants to a relatively small island but now among diverse populations distributed throughout the European continent and the territories that ring the Mediterranean. (Milgrom, North & Weingast 1990, Greif 1989, Greif 1993, Greif 2006). Although individual towns or regions might benefit from the protections offered by a centrally powerful ruler capable of enforcing rules, a great deal of trade took place between local residents and merchants (or their agents) who traveled from afar to sell their goods at markets and fairs throughout the continent. Enforcement by or against foreign traders in disputes with local merchants was a major challenge: the foreign merchant who cheated a local might be long gone before a dispute could be resolved by local courts and unreachable by an adverse judgment. Conversely, foreign traders who suffered at the hands of local merchants might find local judicial systems deaf to their concerns as rulers sought to benefit their own citizens at the expense of foreigners. In many cases, a centralized enforcement body was practically unavailable to support transactions between

local and foreign merchants. Even local merchants who lived in a territory governed by a powerful ruler were likely to face gaps in centralized enforcement of their local transactions, as the availability of enforcement resources was frequently strained by the fairly constant challenges to authority that rulers experienced in this period before the consolidation of stable states.

The achievement of a degree of legal order in commercial transactions in medieval Europe therefore depended on a fairly robust deployment of decentralized enforcement mechanisms to fill sometimes-large gaps in the efficacy or availability of centralized enforcement. Several authors have studied this problem and demonstrated that enforcement of commercial rules in the middle ages rested significantly on community and commercial organizations such as merchant guilds and communes (Greif 1989, Milgrom, North & Weingast 1990, Grief 1993, Putnam 1993, Grief, Milgrom & Weingast 1994, Greif 2006). These organizations provided sets of rules and enforced them, primarily through ostracism and boycott: excluding violators from profitable transactions or from group benefits such as protection. These enforcement systems were fundamentally collective punishment mechanisms, facing the demands of coordination and incentive compatibility.

In some cases, the decentralized collective nature of the punishment delivered by an organization such as a guild are easy to discern. In 1240, for example, Flemish cloth merchants agreed on and wrote up a set of rules governing their trade: “This is the Ordinance of Those Men of Ypres and Douai Who Go to England.” (Moore 1985) The first provision stated that “if a merchant

returns a cloth after he has bought it, giving no reason for the return. . . then henceforth no man of Ypres or Douai shall let him take any cloth away from any of our shops until he shall have paid the full price.” This is an express example of the setting we model in Hadfield & Weingast (2011), with the roles of buyer and seller reversed: a buyer who violates the rules established by a group of sellers is punished by a simultaneous decision among all of them to boycott the offender. Punishing an offender is individually costly: refusing to deal with a merchant will sometimes mean foregoing the profit on a transaction. This collective punishment scheme therefore faced problems of coordination and incentive compatibility.

The coordination problem faced by this collective punishment was addressed by the creation of the document articulating the rules—which stated that it was to be “read out before the community in every fair”—and the establishment of procedures for determining ambiguous cases: Flemish merchants traveled in convoys to English fairs with wardens (probably elected by the guild) with the authority to adjudicate disputes (Moore, p. 96-97). As stated in a subsequent guild ordinance of 1261 dealing with the purchase of wool by Flemish merchants from English sellers, “there will be in each of these cities one man to view and judge the grievances.” (Moore p. 301) In the language of our model, these individuals served as the authoritative stewards of the common logic encapsulated in the Flemish cloth merchants’ ordinances. Their authority was supported by deliberate efforts to make their recognition as final arbiter a matter of common knowledge: any merchant who “should cause shame to the

wardens and thus belittle their office” was subject to a fine of £50 and a year’s prohibition from trading. Their role in elaborating rules to accommodate new and unforeseen circumstances was reflected in provisions empowering wardens to add “any good rule which is not included here”, with the agreement of the community; their authority as managers of a reasoning and legislative power, however, was also reflected in the limitation that while they could expand on the rules they could not abolish provisions unilaterally. Neutrality and the application of impersonal reasoning was supported by provisions declaring that wardens could not decide disputes over a relative who was first cousin or closer. These features serve to support the impersonality of the rules and the general application of abstract public reasoning.

Our model suggests that the incentive problem of this collective punishment scheme could have been overcome by the self-interest of a Flemish merchant who hoped to be the beneficiary of similar protections in the future. Failing to participate in a boycott of a merchant judged by the wardens to have offended under the rules could have signaled to fellow Flemish cloth merchants an abandonment of support for the wardens and the rules. The generality, publication, and stability of the rules—together with the anticipated neutrality of the wardens—would have supported these incentives and therefore collective punishment.

The Flemish merchants did not rely exclusively on self-interested participation in collective boycotts in the first instance. They layered on a separate punishment scheme. In an ordinance from 1261, for example, the

merchants established the rule that no “no present or future member of this alliance shall be so bold as to trade with” any English merchant who “deals falsely with any merchant in this alliance. A further rule then stipulates that “if any merchant of the alliance violates any of these rules or does not hold faithfully to them, he cannot trade in any of the five cities for one year in the product with which he erred” and further, “no member of the alliance may house his goods in England or keep company with the erring merchant”(Moore, p. 301-302). That is, participation in the injunction not to deal with a merchant who cheated a Flemish merchant was enforced by a provision that punished the non-punisher. But even though this appears to abandon the collective punishment mechanism, in fact it merely shifts it to a second-order level. For what enforces the ban on trade for a year imposed on an “erring” member of the Flemish guild who fails to boycott wrongful conduct by an English merchant is an obligation on still other guild members not to deal with the erring member. That secondary obligation—to refuse to deal with the non-punisher—is also enforced, at least in some measure⁸, by collective punishment. As with any system that relies on outlawry as punishment—something we also saw in medieval Iceland—the secondary obligation depended on the voluntary individual decisions of a potentially large number of people to forego valuable commercial and social relationships.

Collective boycotts supported by further collective punishments imposed on guild members who failed to boycott were also used to overcome a further gap in centralized enforcement schemes. As Greif, Milgrom & Weingast (1994)

⁸ It may also have been partially enforced by coercion exercised by municipal authorities at home in Ypres or Douai, although the nature of this authority and the capacity for punishment is unclear.

demonstrate, merchant guilds were able to enforce an obligation on foreign rulers to provide them with protection against theft, attack and contract breach perpetrated by the ruler's citizenry by enforcing an obligation on guild members to boycott rulers who failed to live up to this obligation. Grief (2006) shows how efforts to make these embargoes of rulers who tolerated attacks or cheating of visiting merchants underlay the development of guild institutions throughout medieval Europe. In the early 12th century, for example, German merchants trading in a foreign city would form an organization known as a Kontor and rulers who failed to live up to their agreements with the merchants of the Kontor would see their city boycotted. Members of the Kontor who failed to observe the boycott—failed to participate in collective punishment—were faced with being excluded from trade themselves through a second-order collective punishment mechanism.

But there was a gap in this strategy: other merchants who did not belong to the Kontor—from Germany or elsewhere—faced no threat if they ignored the embargo. And the embargoed ruler faced every incentive to deal with merchants who were not members of the Kontor. This pressure ultimately led to the formation of the Hanseatic League—which coordinated embargoes in which the merchants of the most significant German trading towns participated. Acting collectively, the Hansa was able to effectively cut off the supply of German goods to cities or entire countries when their rulers reneged on negotiated obligations. This is how the German merchants ultimately held the rulers of the city of Bruges, for example, to their promises to keep taxes to a specified level and to

compensate German merchants who had their goods stolen or their bills left unpaid by Flemish citizens. According to Dollinger (1970), by the end of the 14th Century, acting together in this way, the German Hansa had secured an agreement from Count Philip the Bold of Flanders that the cities of Ghent, Bruges and Ypres would compensate a Hanseatic trader if he was attacked within the Count's territories by a Fleming who proved insolvent. The power of the merchant guild to enforce such promises with foreign powers came down to the capacity of the guild to enforce the rules—including the rules prohibiting trade with an embargoed city—with its own members. At this level, the mechanism was dependent on widespread participation in a collective punishment scheme. We would expect that at each of these levels the guilds relied on institutions such as that of the 13th C. Flemish cloth merchants: articulated public rules, designated stewards of the rules and their application, and mechanisms to ensure impersonal reasoning, stability, generality and open process.

A distinctive feature of the Medieval European environment emphasizes the importance of these institutional attributes to support coordination on collective punishment. During this time, there was no settled distribution of jurisdiction as there is today under nation states with stable borders and highly developed internal organization. The guilds of Europe developed in an environment in which a great multiplicity of institutions offered sets of rules and adjudication under those rules. These institutions included municipal entities, royal courts, city-based guilds, craft-based guilds, nobles who operated markets and fairs, and religious bodies. Merchants in Europe thus faced choices about

the rules governing their relationships, and competition as well as risks of intrusion from systems they did not choose. Although modern scholars often look back and see a relatively unified system of commercial law known as the Law Merchant during this period (Berman 1983, p. 342-43; Benson 1989) from the perspective of medieval merchants, there was a great diversity of rules governing transactions. Key contract questions were resolved in very different ways. Under some rules, for example, a binding contract of sale was not formed unless there was a written document; in others an oral agreement was enforceable but only if secured by the payment of earnest money. Some systems held that a seller was free to renege on a purchase after the payment of earnest money and the buyer was entitled to recover the earnest money; others held the seller responsible to pay twice the earnest money if he backed out. Edward I of England declared in his *Carta Mercatoria* in 1303 that if a token amount—a “God’s penny”—had been given over when the agreement was made, then the agreement was fully enforceable: the need for such a declaration suggests that the underlying practices were not otherwise clearly uniform. The Flemish merchants wrote in their ordinance of 1261 that “no broker could give the God’s penny at a fair if he has not the [contracting] merchant with him” (Moore 1985 p. 302). As late as the 14th Century, a treatise on commercial law was seen to declare “that no one could know or ascertain the procedure of the Law Merchant” even within English fairs and towns (Mitchell 1904, p. 7).

In the face of such disparate rules and within an environment of collective punishment (including punishable obligations of participating in punishments

such as boycotts), merchants would have been keenly interested in knowing which set of rules applied. And indeed we see substantial effort devoted by merchant guilds to ensuring that their members' transactions were governed exclusively by their own rules. The guilds of Northern Italy, for example, initially obliged their members to bring disputes to the guild court rather than the ordinary civil court; "the gild did not hesitate to expel members who ignored its claims to jurisdiction, and to forbid trade or commerce with them" (Mitchell pp. 42-43). The guild courts gradually extended their jurisdiction over all mercantile cases within the city (p. 41, pp. 43-45). The reliance on guild rules and adjudicators traveled with the merchants (p. 51). As we have seen with the Flemish merchants, guilds selected individuals to travel with them and adjudicate disputes at English fairs (Moore, p. 99). Even within England, the merchants of individual English cities looked to their own guilds for rules and adjudication. Thus while the rulers or other authorities who operated fairs might have provided sets of rules and adjudicators for participants, they also deferred to separate guild courts within the fairgrounds in some cases. Moore (p. 102) reports, for example, that London merchants "from at least 1298 onwards . . . annually chose four citizens as 'our wardens and attorneys at the present fair of St. Botolph. . .to execute plenary justice to all complaining of them according to the law merchant."

Guild efforts to ensure that their rules were the exclusively effective rules for transactions involving their merchants were no doubt in part driven by the belief that their rules were more desirable for them than other rules. But the emphasis on guild-wide adherence to a common set of rules also suggests the

importance of common knowledge of the rules to support collective punishment. Any individual merchant might elect to operate under a different set of rules when it suited him; but this generated externalities for other guild members, including ambiguity in both their personal transactions and their obligations to participate in boycotts.

C. The California Gold Rush

“When gold was discovered on January 24, 1848, the territory [of California] had none of the usual legal institutions such as a legislature, courts, police or jails” (McDowell 2004, p. 772). Yet disputes over claims were generally rare, and surprisingly little violence arose, at least over the right to engage in the hard work of extracting gold from a digging (Umbeck 1981). Instead,

a common or customary law of the diggings emerged that allowed a miner to hold a small claim for as long as he was working it or left his tools in his hole. When diggings looked promising, however, and likely to attract many miners, those who were on the spot held a meeting to pass a more detailed mining code for that particular area[,] ... [choosing] a chairman, appoint[ing] a committee to draft a code, and a short time later, approv[ing] it by majority vote (McDowell, p. 778).

The substantive content of the codes “varied in detail from camp to camp, and they could be modified at a subsequent miners’ meeting, in which case the rights of claim holders might change from one day to the next” (p. 773). Despite the absence of a centralized enforcement authority, the rules set out in these codes were largely observed. Moreover, as argued by McDowell (2004) and evidenced by the flexibility of the substantive content of the rules, the rules were not merely reflections of underlying normative consensus about what constituted fair claim allocation; indeed “the variation in the rules from camp to camp

suggests that property rules were adopted and cast off as readily as the rules of a game” (p. 801).

When disputes arose between American miners, they were often referred to third parties including ad hoc arbitrators and juries of miners. The miners at Jackass Gulch, for example, specified in their code that “as soon as there is sufficiency of water for working a claim, five days absence from said claim, except in case of sickness, accident or reasonable excuse, shall forfeit the property.” They declared that any disputes –about what counted as a “sufficiency” of water or as a “reasonable” excuse, for example—would be decided by a jury of 5 persons (Umbeck, p. 217). In some camps a jury would be selected on the spot by the disputants, perhaps by flipping a coin to decide who would choose a jurymen first from among the assembled miners. In other mining codes, disputes were to be resolved by a designated arbitrator, perhaps the chairman elected to preside over miners’ meetings or the ‘learned’ man who had written down the rules.

“Almost all litigants complied with [jury or arbitrator] decisions without further ado” (McDowell, p. 788). In the apparently rare cases in which they did not comply immediately, the community would announce clearly to the violator that they were to abandon the diggings or risk community punishment (p. 800). In one episode at Shaw’s Flat in 1852, violators were told that “if they did not leave within the specified time the miners of Shaw’s Flat would carry them and their tools below Steven’s store and put them on foot, and if they returned again they would be dealt with in a different way” (p. 800). These collective efforts

were decentralized in the sense that every participant had to decide whether or not to incur the cost of rising up to protect someone else's claim. Even individual efforts—such as the threat from the poor speller who marked his claim with a sign that said “This is my claim. . . cordin to Clear Creek District Law. . . I will assert by rites at the pint of the sickshirter if legally necessary so taik head and good warnin” (Umbeck, p. 217)—depended on collective participation in the support of the rules. Drawing a six-shooter “by right” reflected the belief that others would recognize the retaliation as legitimate, and not punish the enforcer. This is again an example, as we saw in the discussions of medieval Iceland and Europe, of a role for decentralized collective participation in a punishment scheme: the participation of some in this scheme rests on voluntary decisions not to interfere with individual enforcement efforts—not to provide support to the target of these efforts, for example.

The surprising level of order that prevailed in this period in California—a time when the non-native population increased from 15,000 to 300,000 in the space of a few years and yet there were no centrally controlled authorities capable of enforcing rules—provides a clear example of the value of our approach in distinguishing distinctively legal order from order based on spontaneous social norms, despite the reliance in both cases on decentralized collective punishment. The observation that few interfered with a miner's claim to a new digging site so long as he left his tools in the hole and the size of the claim was small is an example, we argue (as does McDowell, p. 20), of spontaneous social order based on a social norm. But this society moved beyond social

norms to create a legal order, we argue, when the miners in an area—sensing a potentially large claim near the site—met, drew up and adopted a detailed mining code, and then largely behaved in accord with the code. With organization and the adoption of a particular code, the miners deliberately designed a framework for their interaction. They could adapt the code, and hence behavior, to changing circumstances; and they had a recognized means for resolving disputes. We suspect that the practice of shifting to the design of an articulated mining code created by a deliberately chosen body to replace unarticulated norms in the California Gold Rush arose precisely at the point at which ambiguity about what the norms required grew beyond a maximal threshold. None of these attributes of deliberate rule design and adaptation attend the spontaneous norm of respect for a small initial effort at digging: that norm is emergent, and its origin difficult to trace.

Focusing on centralized, public coercive enforcement misses the central difference between these two settings. The enforcement mechanism appears similar in the two cases: both before and after the mining codes appeared, enforcement rested entirely on the decentralized efforts of individuals at the camp. But this similarity obscures the key differences between the spontaneous social order organized around a norm and the deliberate and malleable order created by law.

IV. Modern Examples: Beyond the State's Power to Enforce

A. The World Trade Organization

Like the miners in Gold Rush California in 1848, before effective state government was established, countries deal with each other in an environment that lacks the capacity for coercive enforcement of rules. There is no recognized supra-national legislature capable of imposing rules on individual countries. And yet the international arena is replete with treaties that purport to impose legal obligations on countries. In an approach similar to ours, Hathaway and Shapiro (2011) argue that this international “law” should indeed be recognized as “law” despite its reliance on decentralized exclusion from valuable relationships (which they call “outcasting”) as its enforcement mechanism. We focus here specifically on the WTO: an international organization that establishes rules for countries that wish to participate in the system.

The process used by Australia and New Zealand to resolve a 90 year-old dispute about apple quarantine restrictions presents a strikingly direct application of our model of legal order. The dispute involved fireblight, a bacterial infection that attacks apple orchards. It was discovered in New Zealand orchards in 1919 and, out of fear that its own orchards would become infected, Australia banned imports of apples from New Zealand in 1921. New Zealand pressed repeatedly for access to the Australian market in the ensuing decades and in 2006 Australia released an Import Risk Analysis (IRA) setting out a list of requirements that had to be met in order for New Zealand apples to be imported into the country. New Zealand objected that these requirements effectively continued to shut New Zealand out of the market in Australia and took its case to the World Trade Organization in 2007, complaining that Australia was in violation of its obligations

under the WTO. Article 2.2 of the Sanitary and Phytosanitary Agreement states that members of the WTO “shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence.”

After 3 years of proceedings, with vigorously presented arguments from New Zealand, Australia and five third-party countries (Chile, the EU, Japan, Chinese Taipei and the U.S.) on a range of procedural and substantive issues and extensive factual evidence from scientific experts, a 3-person panel of the WTO released a 550 page report which concluded that Australia’s requirements for importation of New Zealand apples were not supported by sufficient scientific evidence and thus violated Article 2.2. The Report concluded: “The Panel recommends that the Dispute Settlement Body [of the WTO] request Australia to bring the inconsistent measures. . .into conformity with its obligations under the SPS Agreement.” Australia appealed to the WTO’s Appellate Body which, in a 150 page report, affirmed the findings of the original Panel and reiterated that Australia should be “requested” to bring its measures regarding New Zealand apples into compliance. Australia accepted the report and began a science-based review of its restrictions to bring them into compliance.

What explains the efficacy of this process? Why does Australia, after 90 years, now voluntarily decide to engage in a costly process of complying with obligations the legitimacy of which it vigorously resisted? In a formal sense, Australia complies in order to avoid retaliation from New Zealand: if Australia

fails to comply, New Zealand can seek authorization from the WTO to suspend “concessions or other obligations. . . equivalent to the level of nullification or impairment” of Australia’s treaty violation. But this penalty system merely begs the question: why does New Zealand withhold retaliation until authorized by the WTO—that is, why does New Zealand voluntarily comply with this set of rules?

International law scholars offer various answers to these questions, ranging from the domestic political costs that governments incur when they take actions that impose costs on consumers and importing industries to the international reputation costs that states incur when they renege on their deals with other states (see, e.g., Schwartz & Sykes 2002, Guzman 2008). Several scholars (Brewster 2009, Schwartz & Sykes 2002) have noted the difficulty of constructing a sharp account of the reputation mechanism at work: violating an international obligation is costly only if others treat this as a rational basis for inferring that a state is less likely in the future to comply with other international obligations. Does Australia’s failure to comply with an order about apples substantially improve estimates about the likelihood that Australia will live up to investment or nuclear non-proliferation treaties? Certainly across the field of all international obligations this would appear to be a slim source of information, trumped by other more objective assessments based on domestic political interests and capacities, for example, as well as by changes in political administration (Sykes 2011, Posner & Sykes 2011, Brewster 2009).

We do not propose to resolve the puzzle of what, in fact, motivates the observed high levels of compliance with international obligations, or even

specifically with WTO obligations. But we do suggest that our model sheds additional light on the puzzle. Although certainly there are fully bilateral responses that may induce compliance with obligations, and the formal penalty in the WTO is a bilateral retaliation by the injured state, collective punishment clearly plays a role. As we have discussed in the context of Medieval Iceland and the California Gold Rush, the threat of unilateral action—taking revenge on an outlaw or a claim-jumper who violates local rules—is in part supported by decisions made by many others in the community not to punish the punisher. In the context of the WTO, the threat that New Zealand will retaliate when authorized is more credible than the threat that New Zealand will engage in unauthorized retaliation—presumably because there is some costly consequence to New Zealand of ignoring the rules about retaliation.

High degrees of voluntary compliance with a collective punishment scheme emerges in our model as well—explained by the incentive of participants to signal to others that they continue to value the outcome under the coordinated equilibrium above the uncoordinated equilibrium. Decisions to comply with a WTO order, to await authorization before retaliating, to limit retaliation to an authorized level, and to withhold criticism or further retaliation against a third-party that engages in authorized retaliation, are all examples of actions that communicate to the WTO membership as a whole that the WTO systems continues to be sufficiently convergent with the complying country's assessment of acceptable trade behavior. This supports the expectation that the system will continue to coordinate both primary and punishment behavior on the basis of the

rules and principles articulated by the WTO. The WTO setting is of course a much more complex real-world one than our simple model; in particular, the model presents the risk of a bad inference from a failure to comply with the rules about punishment as a sharp one given that all participants are necessary for effective punishment and hence failure to punish by one causes a collapse in the enforcement scheme. This clearly is not the case in the WTO. But we believe this framework nonetheless sheds light on why the WTO displays so many of the features of an equilibrium legal order that can be understood as responses to the coordination and incentive problems facing collective punishment.

The WTO provides a common logic for assessing what are acceptable trade restrictions—both in the first instance and as retaliatory measures. It does so in an environment populated by countries with potentially widely-divergent perspectives on what counts as a justified restriction: in the Apples case, for example, significant attention was paid to the distinction between allowing Australia to choose its own level of appropriate risk of fireblight—a matter the international community does not seek to control—and ensuring that whatever level of risk Australia chose, its restrictions were scientifically warranted as necessary to reduce risks to those desired levels—a matter that is regulated. The procedures used by this common-logic providing institution clearly seem designed to address the ambiguity and incentive problems posed by decentralized coordination in this environment. The WTO rules are written as highly general principles; the SPS rules, for example, simply state that measures are to be “applied only to the extent necessary” and “based on scientific

principles and . . . sufficient scientific evidence.” A single designated body—the Dispute Resolution Body—is capable of articulating a final resolution of how these general principles apply in highly specific circumstances, although the DRB is subject to extensive procedural requirements and characterized by a commitment to recognized legal reasoning methods (such as an appeal to precedent). The DRB (together with the community of international lawyers, who present cases and critique DRB panel decisions) serves as the authoritative steward of that logic. WTO procedures allow for exhaustive public participation by individual countries, including countries that are not direct parties to a dispute. The generality of the system together with an open public process can be interpreted as a set of institutional characteristics that serve to ensure that the elaboration of the common logic is both publicly accessible and seeks to reconcile as much as possible with idiosyncratic reasoning. This supports the incentive of member countries to continue to look to the WTO system to coordinate their punishment, and compliance, efforts.⁹

B. Contracting in the New Economy.

Our final example of legal order in the absence of centralized coercive penalties concerns the obstacles to private contracting that arise even in environments where there is ostensibly coercive enforcement available: the new global economy, with its high rates of innovation and global collaboration. In many settings in the new economy—characterized by high rates of innovation,

⁹ The generality of the WTO principles can also serve other purposes, notably to allow for judicial gap-filling to accommodate adjustments in commitments to unforeseen or complex circumstances. Schwartz & Sykes (2002), Posner & Sykes (2011).

vertical disintegration, and global collaboration (Audretsch 2007)—economic actors frequently use legal documents, seek out legal advice, and employ legal reasoning despite the practical unavailability of formal state enforcement of penalties for legal violations (Hadfield & Bozovic 2011). Many reasons account for the unavailability of formal enforcement. In a classic of economic analysis, Williamson (1975) argued that contracts are often unavoidably incomplete, for example, due to limits on the ability to anticipate, articulate or plan for future contingencies or the cost of presenting verifiable proof of contingencies.¹⁰ For these and other reasons, Williamson (1985) further argued that courts face grave difficulties in enforcing complex contracts. Similarly, the globalization of production and distribution places many suppliers, collaborators, employees, consumers and users beyond the reach of any public enforcement agency.

Nonetheless, contracting parties frequently write legal documents to analyze and expound on legal obligations and legal strategies. Walmart enters into complex contracts with its Chinese suppliers, for example, imposing a panoply of obligations ranging from product quality, price and delivery to compliance with codes of conduct governing child labor and worker safety (Lin 2009). Few of these obligations can be effectively enforced through litigation due to gaps in the availability, expertise and reliability of local courts and the complexity of the rules. Similarly, the fast-moving collaboration between innovative firms such as search engine Yahoo and Firefox browser-provider Mozilla is often heavily influenced by legal documents and reasoning. And yet

¹⁰ Lawyers have recognized the necessary incompleteness of contracts even longer. Macneil (26) emphasized the obstacles to complete contracting, crediting Farnsworth (27) for focusing attention on this phenomenon.

such collaborators maintain the expectation that reputation and repeat business are far more likely to provide incentives to perform than threats of legal penalties. Collaborative efforts to develop innovative products—such as new drugs or medical devices—often are structured using contracts that cannot reasonably be expected to generate concrete formal enforcement during early exploration (Gilson, Sabel & Scott 2009).

The tendency to nonetheless rely heavily on legal advice and documents in these relationships can be understood in our model as aiding the efficacy of decentralized enforcement, particularly through reputation. The common logic institution in these settings can be interpreted to be western (or a particular country's) legal reasoning; the authoritative steward (especially in the context where there is no formal adjudication) is the legal profession, populated by experts in a particular form of reasoning.

We see a potential for institutionalized legal reasoning itself to serve as a coordinating common logic despite the fact that resort to formal adjudication is rare. To be sure, the legal advice contracting partners receive from their independent attorneys will diverge and the system will not achieve the level of clarity we see when there is a single entity capable of resolving ambiguity such as the Law Speaker or the WTO. But a key attribute of legal training in most western-style legal systems is the capacity to anticipate the arguments others will make and to predict how an impersonal and perhaps never-to-be-confronted decisionmaker would resolve ambiguities in the interpretation of documents and the classification of conduct as 'breach' or not. Lawyers become expert when

they develop strong judgment about how others who participate in this same reasoning system will reason. There will remain disagreements, and hence ambiguity, about whether a particular contractual clause should be interpreted one way or another, but the range is far narrower than it would be if the document were not concededly a “contract” under a particular jurisdiction and known to be interpreted by members of a particular brand of reasoners. There will be little disagreement, for example, about the relevance of an early draft which conflicts with a formal document to interpreting a provision in that formal document: under the parol evidence rule, especially if we are in a jurisdiction such as New York where the rule is strictly interpreted rather than California where it is perceived more loosely, the early documents are irrelevant. Lawyers will look to particular forms of evidence—caselaw in the jurisdiction, for example—to help narrow down what a term that calls for “material” adjustments or “best efforts” can mean. By adopting formal legal instruments and documents, therefore, contracting parties improve the coordination of their interpretation of obligations and conduct. Even without perfect clarity, decentralized enforcement schemes such as reputation thus can work more effectively to secure commitments.

V. Conclusion

Over the past few decades, economists, and political scientists have become increasingly interested in the role of law and legal institutions in generating stable market democracies. We have gained considerable insight

into how particular laws and policies impact economic and political activity, particularly in the advanced Western societies where this research is largely conducted. But, as we have argued in this paper, much of this work has been conducted without an overarching social scientific account of law as a phenomenon: how legal rules are distinguished from social norms on the one hand and tyrannical power on the other; how and when the rule of law can be expected to emerge or be stabilized; or explaining the emergence of stability of the characteristics of a distinctively legal order. Moreover, to the extent social scientists provide an account of law, it is rooted in the idea that law exists only when there is centralized rulemaking and centralized coercive enforcement of those rules. As we have shown with a series of scenarios that display significant levels of legal order without the presence of centralized coercive authority, making coercion the *sine qua non* of legal order limits our ability to understand law and to explain and differentiate these settings from other forms of social order.

We have proposed a different starting point for a positive model of legal order, one that presumes a significant if not exclusive role for decentralized enforcement of legal rules and a notion of law as a distinctively intentional, and hence policy-sensitive, form of governance by rules. Focusing on decentralized collective punishment mechanisms such as reputation, retaliation, shame, ostracism, and the like brings into view the central problem of coordinating diverse individuals on common interpretation of when conduct warrants punishment and when it does not. The role of a legal institution—capable of

unique classification of conduct as wrongful or not—in reducing ambiguity to coordinate collective punishments provides an account of what is distinctive about legal order. This approach gives us a new framework for analyzing a wide range of questions that concern social scientists, including the puzzle of how human societies have developed such extraordinary levels of social cooperation, the relative roles played by the evolution of preferences for altruistic punishment and incentive-based accounts of why people are willing to engage in costly punishment, and how institutions might be better designed to support the development of legal order in transition, developing and poor countries and the expansion of global trade and democratic integration

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