On the Spontaneous Emergence of Private Law

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The law-making process ought to be reformed by making it mainly, if not only, a spontaneous process (...)

Bruno Leoni, 1961

I. Introduction

Over time, new legal practices and institutions often emerge and consolidate spontaneously in response to the perceived inefficiencies of centralized lawmaking institutions (such as legislative bodies or bureaucratic agencies). In the last two decades, forms of so-called "spontaneous lawmaking" (SL) have been rapidly expanding both within and outside of North America and primarily in the commercial, business, and financial arenas. This has brought renewed attention to the issue of whether (and under which circumstances) juridical orders with evolutionary characteristics can efficiently provide legal certainty in the absence of centralized lawmaking institutions. In view of these recent developments, analytical tools are needed to recognize when and how SL is capable of providing efficient institutional responses to the demand for law that emerges from the growing complexity of contemporary societies as a result of continuing and accelerated technological changes.

This article provides an explanatory framework of the spontaneous lawmaking process in the area of private law. The lawmaking process is qualified as "spontaneous" in two respects. First, norms emerge from the unplanned convergence of a vast number of mutual adjustments between self-interested individuals. Second, norms are enforced through the independent actions and decisions of self-interested individuals absent centralized enforcing mechanisms. To illuminate the process of the spontaneous emergence of private law, this paper focuses on three issues: (1) the *conditions* under which SL is likely to generate efficient norms, (2) the *mechanisms* that explain the emergence of norms in the absence of centralized enforcing institutions, and (3) the *comparative* advantages

Thanks to Giorgio Rampa, Pnina Alon-Shenker and Michael Trebilcock for comments on earlier drafts.

^{1.} Cf Edward Peter Stringham, *Private Governance: Creating Order in Economic and Social Life* (Oxford: Oxford University Press, 2015).

^{2.} See Gunther Teubner, ed, Global Law Without a State (Aldershot: Dartmouth, 1997); Stewart Macaulay, "Relational Contract Theory: Floating on a Sea of Custom? Thoughts About the Ideas of Ian Macneil and Lisa Bernstein" (2000) 94:3 Nw U L Rev 775; V Gessner, ed, Legal Certainty Beyond the State: Empirical Studies and Theoretical Debates on Institutional Support for Global Economic Exchanges (Oxford and Portland, OR: Onati-Hart, 2007); PT Leeson, "Social Distance and Self-enforcing Exchange" (2007) 37:1 J Legal Studies 161; Gillian K Hadfield, "The Public and the Private in the Provision of Law for Global Transactions," USC Center for Law and Economics Research Paper C09-15 (2009): 09-28; Lisa Bernstein, "Merchant Law in a Modern Economy" (2013) Coase Sandor Institute for Law and Economics Working Paper No 639 (2d series).

and disadvantages in terms of the efficiency of SL compared to public centralized lawmaking processes. The realm of collective lawmaking processes is outside the analytical scope of this contribution, which focuses on the emergence of private law; it concentrates on norms that result from the repeated bilateral interactions between private individuals.

By establishing an analytical framework that identifies the conditions, mechanisms, and efficiency advantages of SL, this paper provides a baseline against which any contemplated introduction of enacted legislation or regulation should be assessed. More specifically, by inquiring into SL the analysis here developed casts doubt on the widely held assumption that the principal legal mechanisms through which societies can resolve pervasive social problems are legislation and regulation, and suggests that, in many cases, politics and bureaucracy are relatively inefficient and ineffective sources of law. Contrary to the usual implicit assumptions in the literature, the organization of the sources of law should not rest on the erroneous presumption that the demand for law cannot be satisfied simply by the spontaneous convergence of complementary individual decisions.³ Before substituting centralized lawmaking institutions for SL, advocates of legislation and administrative agencies should prove that these centralized forms of lawmaking could remedy the inefficiencies of SL while maintaining its efficiency advantages. From this perspective, this article offers a preliminary analytical framework as a starting point for a more comprehensive comparative institutional analysis.

In this paper, I examine SL from an evolutionary game-theoretic perspective. Evolutionary game theory conceptualizes institutions as unplanned behavioural regularities that individuals create over time to solve the recurrent social dilemmas they face.⁴ Social dilemmas are situations in which the interaction between rational self-interested individuals leads to a non-cooperative suboptimal equilibrium.⁵ In this respect, this methodology is congenial to the study of the spontaneous emergence of private law, which is essentially based on the repeated dyadic interaction among private individuals.

This paper is organized as follows. Section II introduces the relevant analytical tools offered by game theory and transaction-cost economics. Section III identifies the conditions for the spontaneous emergence of efficient norms. Section IV identifies three alternative mechanisms that explain the spontaneous emergence of norms. Section V examines the limitations of SL processes. Finally, Section VI provides examples of SL in the area of private law to demonstrate concretely the analytical potential of the proposed framework.

^{5.} See the definition of "social dilemma" provided in Voss, "Game Theoretical Perspectives," *supra* note 4.



I have discussed the theory of law as the spontaneous convergence of individuals' claims in Daniele Bertolini, "The Theory of Law 'As Claim' and the Inquiry into the Sources of Law: Bruno Leoni In Prospect" (2015) 24:3 S Cal Interdisciplinary LJ 56.
 Andrew Schotter, "Why Take a Game Theoretical Approach to Economics? Institutions,

^{4.} Andrew Schotter, "Why Take a Game Theoretical Approach to Economics? Institutions, Economics and Game Theory" (1981) No 81-08, Discussion Paper Series, CV Star Center for Applied Economics; Thomas Voss, "Game Theoretical Perspectives on the Emergence of Social Norms" in Michael Hechter & Karl-Dieter Opp, eds, *Social Norms* (New York: The Russell Sage Foundation, 2001).

Before proceeding, two brief qualifications are necessary. First, for the limited purposes of this discussion, I define an "efficient" norm as that which enables the community to attain a social surplus-enhancing (i.e., "Pareto superior") equilibrium. Second, the analysis includes both social norms and customary rules; I ignore the juridical differences between these two categories of norms and collapse them into the notion of spontaneous norms. This is because I am interested in understanding the conditions for and the process of the spontaneous emergence of socially self-enforcing standards of behaviour in the absence of centralized mechanisms, regardless of whether—once they have emerged—these standards qualify as social norms or warrant legal status as customary rules.

II. Spontaneous Lawmaking

A. Setting the Analytical Stage

Assume a social setting that is characterized by the following conditions: (1) social constraints prevent people from engaging in violent appropriations of others' property, such as fraud, robbery, theft, and so forth; (2) no centralized lawmaking authority has the capacity to create and enforce legal rules that reward cooperation and punish opportunistic behaviour in transactional contexts; (3) a potential Pareto-superior social equilibrium is achievable only if a sufficient number of community members observe and enforce an efficient standard of behaviour; and (4) community members have no incentives to cooperate by contributing to the collective action required to enforce efficient standards of behaviour.

Based on these assumptions, the two questions of interest are (1) whether—and, if so, under which conditions—a process of repeated dyadic interactions among community members can lead to the emergence of efficient norms over time and (2) whether the spontaneous emergence of norms has comparative advantages in terms of efficiency relative to alternative lawmaking institutions.

B. The Advantages of Spontaneous Lawmaking

It is useful to identify three groups of individual actors who are involved in the production of norms: (1) *norm producers*—the actors who participate in the norm-formation process; (2) *target actors*—the actors whose behaviour is regulated by the norm, and (3) *norm beneficiaries*—those whose interests are protected by the norm. The central characteristic of SL is that norm producers coincide with both target actors and norm beneficiaries. While centralized law-making institutions (e.g., legislatures, courts, and bureaucracies) exercise law-making authority upon delegation from norm beneficiaries, spontaneous norms rest on

^{6.} This environmental setting corresponds closely to the one described in Anthony T Kronman, "Contract Law and the State of Nature" (1985) 1:1 J L Econ and Org 5 (identifying a scenario characterized by "possessory security" and "transactional insecurity"). See also Robert C Ellickson, Order Without Law: How Neighbors Settle Disputes, (Cambridge: Harvard University Press, 1991) at 144.



the widespread consensus of norm beneficiaries as manifested by their behavioural choices (i.e., law-making *through practice*).⁷

The absence of delegated lawmaking authority is the source of comparative advantages of SL over public centralized lawmaking institutions. First, in SL, people express their preferences through direct participation in the normformation process instead of delegating the norm-creation function to a third party. This increases the informational efficiency of the process of norm creation. Unlike centralized law-making bodies, individuals have a direct perception of their costs and benefits.8 Second, the fact that norm producers and norm beneficiaries are two identical sets of individuals raises the cost of irrational behaviours in the process of norm creation and, therefore, generates incentives for norm producers to have rational beliefs and behave accordingly. This is a significant difference between the incentive structure confronted by norm producers in SL and the incentives faced by voters and politicians in political processes. Finally, SL has a relative advantage over bureaucracies in environments that are characterized by technical complexity. This is true, for example, in professional environments in which the identification of efficient standards of conduct requires the technical information and specialized knowledge possessed by professionals. In general, greater economic specialization widens the informational disadvantages of centralized processes and calls for decentralized forms of norm production.

C. Norms as Evolutionary Responses to Game Inefficiencies

The SL process can be explained using the analytical instruments offered by game theory and transaction-cost economics. ¹⁰ In an idealized zero-transaction-cost environment, ¹¹ individuals would adopt efficient legal rules through simple dyadic contacts. *The spontaneous emergence of law through repeated contractual practice would be the most efficient lawmaking process*. There would be no obstacles to cooperation, and parties would be able to adopt efficient legal rules according to changing economic circumstances. ¹² From a game-theoretic perspective, in an environment without transaction costs, every time a Pareto-superior alternative becomes available, thereby making the existing equilibrium

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Francesco Parisi & Vincy Fon, The Economics of Law-Making (Oxford: Oxford University Press, 2009).

^{8.} See Francesco Parisi, "Toward a Theory of Spontaneous Law" (1995) 6:3 Const Political Economy 211 at 231; Robert D Cooter, "Structural Adjudication and the New Law Merchant: A Model of Decentralized Law" (1994) 14:2 Int'l Rev L & Econ 215; Ellickson, *Order Without Law, supra* note 6 at 171 (discussing problems of "metric appraisal of social welfare").

^{9.} Cf Bryan Caplan, *The Myth of the Rational Voter: Why Democracies Choose Bad Policies* (Princeton: Princeton University Press, 2007).

^{10.} On the one hand, game theory elucidates the strategic interaction between individuals, which largely affects the costs associated with SL. On the other hand, transaction cost economics illuminates the structure of the costs associated with the creation and enforcement of standards of behaviour, which affects the strategic interaction between individuals.

^{11.} That is, in a hypothetical scenario with zero costs associated with the process of adopting and enforcing norms.

^{12.} The evolutionary forces generated by the competitive adjustments of individuals to changing situations would lead parties to adopt the norms that they would have chosen if they had been free to enter into binding agreements. Parisi, "Spontaneous Law," *supra* note 8.

suboptimal, evolutionary corrective mechanisms, spurred by repeated bargaining practice, would lead private actors to the adoption of a superior norm that enables them to attain the maximum available (cooperative) surplus.¹³

Once the assumption of zero transaction costs is dropped, the existence of a Pareto-superior alternative is not a sufficient condition for the spontaneous emergence of the efficient legal rule. ¹⁴ If, for the individual, the costs of contributing to the collective enforcement of a superior standard of behaviour exceed the expected economic losses generated by the coordination problem that the rule is supposed to resolve, there is no incentive for him or her to contribute to the process of law creation and enforcement. Consequently, either the community remains in a suboptimal equilibrium or the construction of a centralized lawmaking process becomes necessary for the society to adopt the superior norm. Therefore, it is the presence of the significant transaction costs of creating and enforcing norms that explains the emergence and persistence over time of inefficient customary legal rules and the emergence of alternative sources of law.

In general, a Pareto-superior rule tends to emerge and consolidate over time only if the pattern of behaviour that is compatible with the efficient norm is supported by Nash strategies by all parties. 15 If the strategy that is consistent with the emergence and persistence of a superior norm (e.g., cooperative behaviour) does not correspond to the dominant strategy of one of the actors involved, he or she will always be tempted to switch to the dominant (non-cooperative) strategy, thereby preventing the community from consolidating a stable, optimal Nash equilibrium. In essence, in environments with significant transaction costs, two conditions are necessary to support SL: (1) the availability of a Pareto-superior norm prescribing a pattern of behaviour that enables society to attain the higher cooperative surplus and (2) a Nash strategy equilibrium supporting the pattern of behaviour that is compatible with this superior alternative. Under these two conditions, norms emerge *spontaneously* over time, thereby enabling the members of a community to overcome evolutionary stalls and achieve a socially efficient outcome instead. Customary rules arise as "evolutionary responses to game inefficiencies" or "possible correctives to strategic stalls." ¹⁶

The foregoing discussion leads to an important conclusion. When the behaviour that conforms to a norm is supported by a Nash strategy for all the actors involved, the norm is *self-enforcing*—that is, rational actors conform in response to incentives that make conformity to the norm convenient to them, despite the absence of a centralized enforcing entity that administers sanctions to norm violators. The self-enforcement mechanism allows for the spontaneous emergence and persistence of norms. Self-enforcing norms are also called "conjoint norms," emphasizing the fact that the beneficiaries of the norm and the target actors *conjoin* to create and enforce norms, thereby enabling them to cooperate and attain

^{17.} James S Coleman, *Foundations of Social Theory* (Cambridge: Harvard University Press, Belknap Press, 1994) at 247-48.



^{13.} Ibid at 214.

^{14.} *Ibid*.

^{15.} *Ibid.* See also Voss, "Game Theoretical Perspectives," *supra* note 4.

^{16.} Parisi, "Spontaneous Law," *supra* note 8 at 211.

the maximum available cooperative surplus. The sets of the beneficiaries and target actors are identical and, by force of the incentive structure underlying Nash strategies, generate and enforce mutually binding norms of behaviour.

D. The Structure of the Social Dilemma

The existence of the two conditions identified above does not necessarily speak to the efficiency of SL. In general, SL is efficient to the point where the marginal cost of allowing private parties to devise efficient solutions for the social dilemma they face does not exceed the marginal costs of doing so by means of increasing degrees of centralization of lawmaking and law enforcement. To appreciate the relative costs of SL, it is useful to inquire into the *structure* of the situation that generates the demand for norms. Different social dilemmas call for different social mechanisms, which affect the structure and magnitude of the costs of supplying an adequate institutional response.

In this respect, it is useful to distinguish between (1) coordination problems (hereinafter "CP") and (2) prisoner-dilemma (hereinafter "PD") situations. ¹⁹ In CP situations, players share a common interest in mutual cooperation and have incentives to coordinate their choices. When players overcome the coordination problem, they have no incentive to move away from the cooperative equilibrium and engage in unilateral defection. In CP situations, the establishment of a *convention* is sufficient to enable a group to produce a cooperative surplus and benefit each individual. Because of the common interest in cooperation, the convention is a self-enforcing equilibrium; individuals have no incentive to defect unilaterally because conformity to the convention benefits everyone. In essence, there is no incentive problem. The convention provides a focal point around which individuals coordinate their behaviour; therefore, the enforcement of sanctions is unnecessary to ensure cooperation. ²⁰

Unlike CP, in PD situations, opportunistic behaviour and unilateral defection are the dominant strategies of the actors involved. The classic two-person PD situation can be summarized as follows. Consider two individuals, a and b. Individual a faces the following payoff schedule, depending on the strategic interaction with b: (S1) if a unilaterally defects and b cooperates, then a obtains the highest possible payoff; (S2) if a unilaterally cooperates while b defects, then a receives the worst possible payoff; (S3) if a defects and b defects, then a is worse off than in (S1) but better off than in (S2); (S4) if a and b cooperate, then a receives less than in (S1) but is better off than in both (S2) and (S3). The same payoffs schedule holds for b. It follows that in the absence of any assurance of the other player's cooperation, each player is confronted ex ante with the following payoff schedule: (S1) > (S4) > (S3) > (S2). Both players have incentives not to cooperate in order to avoid the worst possible scenario of unilateral cooperation (S2).

^{20.} David Lewis, *Convention: A Philosophical Study* (John Wiley and Sons, 2008).



^{18.} Kronman, "Contract Law," supra note 6.

^{19.} Edna Ullmann-Margalit, *The Emergence of Norms* (Oxford: Clarendon Press, 1977); Eric A Posner, "Law, Economics, and Inefficient Norms" (1996) 144:5 U Pa L Rev 1697 at 1714.

From a social standpoint, the preference ordering is as follows: (S4) > (S1) = (S2) > (S3). In other terms, bilateral cooperation maximizes the social surplus, while bilateral defection minimizes it. The crucial point is that because unilateral defection is the dominant strategy for both a and b, the Nash equilibrium is a bilateral defection (S3). Although, from a social standpoint, bilateral cooperation maximizes the social surplus, the strategic interaction between individuals finds equilibrium in (S3), which is the social surplus-minimizing scenario.

Prisoner Dilemma Situation Payoff Schedule	
INDIVIDUAL	SOCIAL
(S1) > (S4) > (S3) > (S2) social equilibrium is $(S3)$	(S4) > (S1) = (S2) > (S3)

The different incentive structures of CP and PD situations entail different cooperation-facilitating mechanisms. In PD situations, unlike CP situations, the establishment of a convention is not sufficient to ensure cooperation. Once the convention is realized, the parties have an incentive not to conform to the prescribed behaviour. Consequently, in PD situations, *sanctions* against violators must be administered to ensure mutually advantageous cooperation. As Gillette observes, the lawmaking process confronts the problem of transforming a PD game ("in which no party will move to the new equilibrium because they are confident that no one else will")²¹ into an assurance game ("in which all parties will be willing to move to the new equilibrium because they are confident that a sufficient number of others will").²²

III. Conditions

A. Self-Enforcing Norms in Prisoners' Dilemma Situations

As previously noted, actors in PD situations deal with a first-order collective action problem: they fail to achieve a mutually advantageous efficient outcome because they have no incentives for mutual spontaneous cooperation. This first-order collective action problem generates the demand for norms that enable parties to achieve mutual cooperation. However, because the creation and enforcement of norms is itself a public good, a second-order collective action problem arises: rational individuals do not have the incentive to participate in the collective action required to create and enforce norms.²³ The second-order collective action problem potentially prevents the community from creating the norms that are required to overcome the first-order collective action problem.

This raises a puzzling question: if individuals fail to overcome the first-order collective action problem, how can they overcome the second-order collective action problem? Stated differently, if parties have no incentives to achieve

^{21.} Clayton P Gillette, "Lock-In Effects in Law and Norms" 9 (1998) 78:3 BUL Rev 813 at 819. **22.** *Ibid* at 820.

^{23.} Oliver Pamela, "Reward and Punishments as Selective Incentives for Collective Action" (1980) 85:6 Am J Sociol 1356; Douglas D Heckathorn, "Collective Action and the Second-Order Free Rider Problem" (1989) 1:1 Ration and Soc 78.

the efficient cooperative outcome, how can they have incentives to cooperate and produce a conjoint social norm? Although there is no easy answer to this question, it is possible to identify the conditions that facilitate a spontaneous solution to the second-order collective action problem in the absence of a centralized lawmaker.

Game theory suggests that long-term repeated interactions generate the conditions for the decentralized self-enforcement of conjoint social norms.²⁴ The core parameters of game-theoretic models include: (1) the structure of parties' payoffs—that is, the relative costs of conflict and cooperation; (2) the discount factor—that is, the shadow of the future; (3) the number of decision-making actors—that is, the size of the group that benefits from the norm; and (4) the actors' ability to promptly punish defection. Based on these four variables, game theory suggests that self-enforcing norms of cooperation are likely to emerge within (relatively) small communities of culturally and economically homogeneous farsighted individuals who engage in repeated mutual interactions. Ellickson's famous study on the informal mechanisms adopted by residents of rural Shasta County, California to solve disputes arising from wayward cattle provides suggestions that are in line with game-theory analytical findings. He demonstrated that social welfare-enhancing norms tend to emerge spontaneously if the population is a *close-knit* community. ²⁵ Close-knit environments reduce the transaction and information costs associated with informal enforcement, thereby fostering cooperative behaviour and overcoming the incentive problem in PD situations.

The next three subsections identify the constitutive elements of close-knittedness and inquire into whether there are institutional mechanisms that induce cooperation by mimicking the conditions of close-knittedness.

B. Close-Knittedness

The notion of close-knittedness summarizes the essential conditions that facilitate the spontaneous emergence of efficient norms in environments that lack a centralized lawmaking authority. By drawing on Ellickson's work and other more recent contributions, it is possible to identify the following conditions under which individuals have sufficient incentives to choose cooperative social welfare-enhancing strategies.²⁶

^{26.} For a law and economics perspective, cf Lisa Bernstein, "Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry" (1992) 21:1 J Legal Studies 115; Lisa Bernstein, "Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms" (1996) 144:5 U Pa L Rev 1765 at 1821. For an evolutionary economic approach, cf Jack Hirshleifer, "Evolutionary Models in Economics and the Law: Cooperation



^{24.} See Michael Taylor, *Anarchy and Cooperation* (Chichester: Wiley, 1976); Michael Taylor, *The Possibility of Cooperation* (Cambridge: Cambridge University Press, 1987); Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984).

^{25.} See Ellickson, *Order Without Law*, *supra* note 6 at 167 ("members of a close-knit group develop and maintain norms whose content serves to maximize the aggregate welfare that members obtain in their work-day affairs with one another"). See also Ullmann-Margalit, *The Emergence of Norms*, *supra* note 19 and Karl-Dieter Opp, "The Emergence and Effects of Social Norms: A Confrontation of Some Hypotheses of Sociology and Economics" (1979) 32:4 Kyklos 775.

1. Non-Zero-Sum Games

Zero-sum (or constant-sum) games are purely distributive situations: what one player gains, the other loses. These are conflictual games with no room for mutually advantageous cooperation. Because there is no available aggregate surplus from reciprocal cooperation or coordination, the conflictual nature of distributive games entails no incentive for mutually advantageous cooperation or coordination. Thus, in zero-sum situations, norms will *not* emerge spontaneously without the presence of a centralized third-party institution.²⁷ Unlike purely distributive games, close-knit environments are characterized by the availability of a surplus that is gained from mutual cooperation; norms ensuring that cooperation can emerge spontaneously in positive-sum games.

2. Reciprocal Enforcing Power

In strategic interactions, credible threats and promises affect actors' strategies. This principle applies to the context of a close-knit community, with the presence of a promise (or threat) to promptly enforce sanctions in the case of norm violation. The condition of credibility results when the informal power to punish norm violations is widely distributed among the community members. The power of reciprocity among group members constitutes the structural condition that ensures the credibility of the enforcement mechanisms. I will discuss reciprocity in greater detail in the following section.

3. Continuing Relationships

In the absence of a centralized enforcement mechanism, continuing relationships among community members provide the opportunity for a credible enforcement mechanism. Close-knit communities are stable social networks in which the probabilities of future encounters are sufficiently high to make the enforcement of sanctions credible. The prospect of future repeated interactions has a twofold incentive effect. On the one hand, it increases the expected *costs* of defection versus cooperation for norm violators (thereby increasing the net benefits of abiding by the rule). On the other hand, it increases the net *benefit* gained by participating in collective enforcement because the expected benefit of the compliance of a target actor increases with the likelihood of future encounters. In short, the probability of *future* interactions among members of a close-knit community modifies current

^{27.} See Gordon Tullock, *The Social Dilemma: The Economics of War and Revolution* (Blacksburg: University Publications, 1974).



Versus Conflict Strategies" (1982) 4 Research in Law & Econ; Robert Sugden, "Spontaneous Order" (1989) 3:4 J Econ Perspectives 85; Jon Elster, "Social Norms and Economic Theory" (1989) 3:4 J Econ Perspectives 99; Werner Gueth & Axel Ockenfels, "Evolutionary Norm Enforcement" (2000) 331 CESifo Working Paper Series (Munich: CESifo Group) Paper No 331. On social norms, cf Richard H McAdams, "The Origin, Development, and Regulation of Norms" (1997) 96:2 Mich L Rev 338; Richard McAdams, *The Expressive Powers of Law: Theories and Limits* (Cambridge: Harvard University Press, 2015).

individual behaviours by strengthening the enforcement mechanism and weakening the disposition toward norm violation. In turn, this enables the community to prevent or limit opportunistic behaviours that defeat cooperation.

The possibility of future interaction plays an important role in situations in which individual incentives are misaligned.²⁸ In this respect, it has long been demonstrated that the effect of future interactions on the levels of cooperation in a PD game is largely influenced by the players' *discount rate*. This line of reasoning culminates in the so-called *folk theorem*, according to which any (individually rational) payoff can be supported by a Nash equilibrium in infinitely repeated games, if players have sufficiently high discount factors.²⁹ Although a discussion of the folk theorem is beyond the scope of this paper, it is important to underline the existence of a *threshold* value of the discount factor above which rational private parties decide to cooperate.

4. Adequate Knowledge and Information

The conditions of power reciprocity and continuing relationships are not sufficient to ensure cooperation. First, people have incentives to cooperate only if they have adequate information about the structure of the *payoffs* associated with the alternative available courses of action in each period. Second, cooperation requires historical knowledge about the behaviour of opposing players in prior games. In both respects, the existence of close-knit groups reduces the costs of obtaining the knowledge and information necessary for cooperation. Close-knittedness helps group members to develop a common "objective valuation system, which they need in order to assess the welfare-enhancing tendencies of various norms."³⁰ This is a crucial factor: strategies that evolve into social norms maximize the expected payoff for each group member and are enforced against case-by-case opportunism. In addition, gossip networks and reputational mechanisms, which normally emerge in close-knit communities, enable people to acquire information about how group members acted in the past and how reliable and trustworthy they are as potential trading partners.

Before proceeding, the following clarification regarding close-knittedness is needed. The four structural conditions identified above do *not* necessarily require close-knit groups to be *small*.³¹ Although small group size certainly facilitates cooperation, the structural requisites of reciprocity, long-term relationships, adequate knowledge, and information may occur *independently* of group size. Ultimately, targeted and beneficiary actors may be geographically distant and operate in different industries. This point emphasizes the high potential of SL as

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^{28.} David M Kreps et al, "Rational Cooperation in the Finitely Repeated Prisoner's Dilemma" (1982) 27:2 J Econ Theory 245; Francesco Parisi, "The Formation of Customary Law", paper delivered at the 96 Annual Conference of the American Political Science Association, Washington, DC, September 2000.

^{29.} Drew Fudenberg & Eric Maskin, "The Folk Theorem in Repeated Games with Discounting or with Incomplete Information" (1986) 54:3 Econometrica 533.

^{30.} Ellickson, *Order Without Law*, *supra* note 6 at 181.

^{31.} Ibid at 182.

an effective source of regulation in various regulatory environments.

C. Role Reversibility

Role reversibility occurs when, over time, the parties to a repeated dyadic exchange face the same probability of being on either side of the exchange. This is also called "stochastic symmetry," and it underlines the fact that parties cannot predict on which side of the relationship they will be in future exchanges (e.g., they can be either the seller or buyer with unpredictable probability). Under these conditions, parties are subject to *symmetric* incentives. Alternative rules entail the same expected benefit and costs; therefore, the parties face the incentive to converge upon the same set of rules that maximize their individual benefits (and the aggregate welfare). In short, environments that are characterized by stochastic symmetry are more likely to be regulated by spontaneously emerged norms of behaviour than environments characterized by asymmetric distribution of market power among opposing groups (e.g., economic sectors with a sharp polarization between consumers and producers).³³

D. Reciprocity Constraints

Structurally asymmetric situations can be redressed through institutional constraints that induce reciprocity by binding the strategic choices of opposing parties.³⁴ As Parisi observes, "If one player's strategy is rigidly bound to that of his opponent, the reward for unilateral defection is rendered unobtainable."³⁵ This is because the mechanism of reciprocity constraints formalizes a tit-for-tat strategy, in which opposing parties with symmetric incentives engage in a defection strategy that punishes unilateral defection.³⁶ Reciprocity constraints foster cooperation by altering parties' payoff structures and rendering unattainable the payoff from unilateral defection. Thus, through the imposition of a symmetric constraint, a non-cooperative equilibrium is changed into a cooperative equilibrium. This mechanism, which is also called "induced symmetry," emphasizes that the symmetric advantages of cooperation are generated by the presence of institutional constraints that eliminate the incentives to undertake unilateral defection strategies.³⁷

^{32.} Ibid. See also Parisi, "Customary Law," supra note 28 at 10.

^{33.} See Parisi, "Spontaneous Law," supra note 8 at 217-18.

^{34.} Ibid at 218.

^{35.} Ibid at 218-19.

^{36.} Parisi emphasizes the case of article 21(1)b of the Vienna Convention of 1969, which establishes that the formulation by state A of a reservation against state B automatically generates the effect of producing a reservation of state B against state A.

^{37.} When the inefficient equilibrium is characterized by symmetric individual strategies, the imposition of a reciprocity constraint is incapable of promoting a cooperative efficient equilibrium. For example, in the battle-of-sexes game, parties have an incentive to adopt a coordinated strategy, although they have opposite preferences regarding the best coordinated strategy. Reciprocity is intrinsic to the same payoff schedule generating an inefficient strategic equilibrium (i.e., a coordinated strategy is preferred to a non-coordinated one). In this type of situation a reciprocity-inducing mechanism does not affect the equilibrium of the game.

IV. Mechanisms

I have not vet identified the social mechanisms through which new Paretosuperior norms supplant old inefficient ones. The central question is how norms that prescribe socially efficient behaviour become the object of enforcement by self-interested individuals. That is, how do norms become "public" (or "legal") in the absence of a centralized lawmaking mechanism and based on private enforcement? It is critical to explain why the equilibrium supported by the existence of a norm is preferable for all members of the community to the non-cooperative equilibrium, even in the absence of a centralized enforcement authority. To answer this question, it is useful to distinguish analytically between "coordination" and "incentive" problems. Coordination problems arise from the necessity of coordinating individual decisions to punish inefficient behaviours. Assuming that people have incentives to bear the costs of enforcing the norm, coordination problems involve determining how multiple, simultaneous individual decisions to punish can be coordinated to generate a coherent and predictable enforcement process. In comparison, incentive problems arise when self-interested individuals are unwilling (because they have no incentive) to bear the costs of punishing the norm violators.

In this subsection, I briefly discuss three explanatory hypotheses of how norms emerge and evolve spontaneously to overcome both coordination problems and incentive problems. The discussion will enable us to enhance our appreciation of the conditions under which SL can work in the real world as an efficient source of law in the absence of a centralized lawmaking authority.

A. Change Agents and Informational Cascades

The first question to address concerns how self-interested individuals who belong to a community can acquire the technical and social knowledge necessary to appreciate the benefits of a superior social norm. Ellickson developed an explanatory model that proves useful in this respect.³⁸ He describes the mechanism of norm production as a market for norms. The demand for norms arises from group members' need to overcome a negative externality and induce people to internalize the costs of their behaviour. The group members can assume three distinct roles with respect to the process of norm emergence: actors, enforcers, and members of the audience. *Actors* are people who engage in some primary behaviour that has consequences for the welfare of the group. *Enforcers* observe actors' behaviours and administer punishments or rewards. Members of the *audience* observe both actors and enforcers and administer social rewards and punishments to enforcers in the form of either social esteem or disesteem. The supply of new norms is provided by either the actors (through their pattern of behaviour) or the enforcers (through their enforcement reaction to actors' behaviour).

The key point is that group members are heterogeneous in (1) personal

^{38.} Robert C Ellickson, "The Evolution of Social Norms: A Perspective from the Legal Academy" in Hechter & Opp, *Social Norms*, *supra* note 4.



endowments, (2) discount rates, (3) technical intelligence (i.e., the ability to assess the costs and benefits of alternative pattern of behaviours), (4) social intelligence (i.e., the ability to forecast people's reactions to norm change), and (5) leadership skills. Because of these differences, group members play distinct roles in the process of legal change. When an exogenous shock in the socioeconomic environment triggers the need for a new superior social norm, some actors or enforcers have incentives to supply a new advantageous social norm. Ellickson uses the term "change agents" to describe the actors or enforcers who first react to the exogenous shock by supplying the new norm.

Because of their superior technical or social intelligence, and leadership skills, change agents face lower opportunity costs or higher benefits in the process of legal change. "Self-motivated" leaders anticipate that they will receive greater benefits from the new norms. "Norm entrepreneurs" promote a change in a specific norm; they possess a high level of technical knowledge that enables them, respectively, to have an early appreciation of the cost-benefit advantage of a new social practice and to anticipate that experts among the group's members will confer esteem on the promoter of the change. Finally, "opinion leaders" do not necessarily receive tangible benefits from the new norm (as self-interested leaders) nor possess superior technical intelligence (as norm entrepreneurs). However, their high level of social intelligence enables them to anticipate which social change is likely to receive greater social support. They observe other change agents and decide which legal change to support. As Ellickson emphasizes, "[o]pinion leaders therefore play a pivotal role in determining whether a change agent succeeds in triggering a cascade toward a new norm." 40

When an exogenous shock determines the socioeconomic conditions favouring a change in existing social practices, the self-interested leader and norm entrepreneurs supply new norms that have the potential to improve social welfare by governing the social dilemma more efficiently. Self-interested leaders advocate social change by undertaking exemplary acts or conferring rewards and punishments to signal the efficiency of the new norm (or the inefficiency of the existing norm). If they foresee social conditions that are favourable to promoting the transition toward the new norm, opinion leaders begin conferring esteem on change agents who have acted as promoters of the change. At this point, some members of the audience will finally be in a condition to appreciate the benefits of the superior social norm. They will be encouraged by the positive reactions of the opinion leaders to the social change and by the technical experts' appreciation of the new norm. When some audience members begin conforming to the new norm, informational and reputational cascades will converge to determine a mass migration toward the new norm. Informational cascades will occur because the mass of ordinary audience members will interpret the early supply of the norm as a signal of its efficiency and the social approbation of the new pattern of behaviour. Reputational cascades will reinforce the tendency to conform because ordinary audience members will wish to avoid being socially marginalized.

^{40.} *Ibid* at 45.



^{39.} Ibid at 41.

B. Norm Internalization

Another explanation of the emergence of norms refers to the process of the *internalization* of norms by target actors. This point is the subject of a vast body of literature investigating the moral, psychological, and philosophical reasons why people internalize norms.⁴¹ Here, I draw conclusions about how internalization affects the incentive structure of individuals and helps to explain the emergence of norms.

First, from an economic standpoint, internalization provides individuals with additional incentives to behave in the manner in which the norm prescribes. thereby altering the calculus of the psychological costs and benefits of alternative strategies of behaviour. As Cooter notes, "internalization attaches a guilty penalty to violating a norm, which can change the sign of the net psychological benefits."42 Consider the classic agency game situation in which two parties interact strategically. The principal has to decide whether to invest, and the agent has to decide whether to appropriate or cooperate. In the absence of an enduring relationship or enforceable agreement, the agent has the incentive to appropriate; the principal anticipates the non-cooperative behaviour of the agent and, consequently, decides not to invest. The available cooperative surplus is lost because, in the absence of coordinating devices, non-cooperation is the dominant strategy of both actors. In contrast, the internalization of the norm that prescribes cooperation on the part of the agent reduces the payoff of appropriation, thereby rendering cooperation the dominant strategy.⁴³ "In the agency game, people who internalize the norm will cooperate, not appropriate, even if the objective payoff for cooperating is slightly lower than for appropriating."44

Second, internalization provides individuals with additional incentives to participate in the enforcement process. A person who internalizes a norm is more willing to invest resources to take part in the enforcement process for the benefit of others. Gossip networks and ostracism are relatively cheap methods of sanctioning non-cooperative behaviour and increasing the expected costs of norm violation. Thus, the internalization of norms is a potentially effective mechanism for overcoming the second-order free-rider problem, which plagues the enforcement of norms in the absence of a centralized authority.

44. Cooter, "Structural Adjudication," *supra* note 8 at 1667.



^{41.} See, for example, Ernest Q Campbell, "The Internalization of Moral Norms" (1964) 27:4 Sociometry 391; John F Scott, *Internalization of Norms: A Sociological Theory of Moral Commitment* (Englewood Cliffs: Prentice-Hall, 1971); Amitai Etzioni, "Social Norms: Internalization, Persuasion, and History" (2000) 34:1 Law & Soc'y Rev 157; Robert D Cooter, "Do Good Laws Make Good Citizens? An Economic Analysis of Internalized Norms" (2000) 86:8 Va L Rev 1577; Tom R Tyler, *Why People Obey the Law* (Princeton: Princeton University Press, 2006); Robert Cooter, "The Intrinsic Value of Obeying a Law: Economic Analysis of the Internal Viewpoint" (2006) 75:3 Fordham L Rev 1275; Stephen Shavell & Louis Kaplow, "Why is it Socially Desirable That People Obey the Law?" (2010) 682 Harvard Law, Economics and Business Discussion Paper.

^{42.} Robert Cooter, "Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant" (1996) 144:5 U Pa L Rev 1643 at 1662.

^{43.} *Ibid* at 1663. See also Michael E Price, Leda Cosmides & John Tooby, "Punitive Sentiment as an Anti-Free Rider Psychological Device" (2002) 23:3 Evolution and Human Behavior 203 (explaining that one function of punitive sentiments could be to recruit labour for collective actions).

C. Law as a Coordinating Device

Both Ellickson's model and the theory of the internalization of norms are useful because they identify two important mechanisms that lead to norm creation and enforcement. However, they fail to fully demonstrate how, maintaining the assumption of rational choice theory, rational self-interested group members conform to social norms *in response to incentives created by themselves*. Ellickson's model explains how group members come to appreciate the advantages of new social practices. However, the decision to conform to norms is explained by informational and reputational cascades: people decide to conform to the new norms because they rely on others' decisions and want to avoid being socially marginalized. In comparison, the theory of norm internalization captures a mechanism that is powerful in generating conformity to social norms, but it largely relies on arguments outside of the explanatory domain of rational choice theory. For the purposes of this study, there is a need for an economic explanation of how self-interested individuals surmount the "coordination" and "incentive" problems associated with norm creation and enforcement.

Hadfield and Weingast⁴⁵ recently proposed an insightful explanation of the institutional mechanism that enables community members to reach and support a cooperative equilibrium through collective punishment in the absence of a centralized coercive enforcement body. Their model *links the solution of both the coordination and incentive problems to the structural attributes of law.*⁴⁶ Here, I borrow some insights offered by this model to explain why, in some cases, group members prefer the cooperative equilibrium supported by the existence of a norm to the non-cooperative equilibrium that is based on individual defection, despite the absence of a centralized enforcement authority.

It should be recognized that in the absence of a centralized authority that ensures that norm violations are met with effective punishment, people's preferences for norm compliance is *conditional* in nature. The individual prefers conformity to violation if he or she believes that (1) a sufficient number of other individuals conform to the norm and (2) a sufficient number of other individuals expect him or her to conform to the norm and are willing to punish him or her in the case of a violation.⁴⁷ I refer to these two distinct expectations as the "empirical expectation" (others conform) and the "normative expectation" (others expect conformity and are willing to mete out the punishment for non-compliance).⁴⁸ Hadfield and Weingast's model demonstrates that individual participation in the collective enforcement of norms reinforces the empirical and normative expectations of the group members, thereby allowing the norms to exist. I will clarify

^{45.} Gillian K Hadfield & Barry R Weingast, "What is Law? A Coordination Model of the Characteristics of Legal Order" (2012) 4:2 J Legal Analysis 471.

^{46.} *Ibid* at 476 ("An important implication of our model is that it provides a link between the attributes of legal order that many intuitively associate with law and the resolution of the coordination and incentive problems that underpin effective collective punishment").

^{47.} I draw from Cristina Bicchieri, *The Grammar of Society: The Nature and Dynamics of Social Norms* (Cambridge: Cambridge University Press, 2006) at 8-28.

^{48.} Here, I use a simplified version of the more elaborated terminology introduced by Bicchieri in *The Grammar of Society, ibid.*

this point by explaining how norms allow individuals to overcome the coordination and incentive problems.

First, norms function as a coordinating device because they provide community members with a *common logic* for the identification and classification of wrongful conduct.⁴⁹ Hence, the supply of a common normative logic enables individuals to coordinate with each other to collectively administer costly penalties to norm violators.⁵⁰ In fact, the existence of a norm allows for "public and impersonal" reasoning on the basis of which individuals can make simultaneous decisions about whether to punish those who engage in non-cooperative behaviours. In brief, norms solve the coordination problem by coordinating individual expectations about how behaviours can be classified for the purpose of the enforcement process.

Second, the enforcement of norms reinforces the expectations of group members about the likelihood that the inefficient (non-cooperative) behaviour will be punished. Participating in collective punishment allows group members to signal to potential norm violators that the inefficient behaviour is considered a wrongful act and, as such, is punished according to the common normative logic established by the norm. The enforcement of sanctions reinforces the empirical and normative expectations of potential wrongdoers (and, therefore, their compliance), thereby raising the expected value of participating in collective enforcement. This is the fundamental reason that self-interested individuals are willing to incur the costs of inflicting punishment even when the costs of a single, inefficient behaviour does not affect them personally: people have an incentive to participate in the collective punishment, enabling them to affect other people's beliefs about (1) the likelihood of punishment in case of violation and (2) the likelihood of enforcement by other group members. The act of enforcement is an effective signal to other group members that the equilibrium based on the observance of the pattern of behaviour prescribed by the common logic corresponds to each individual's private interest.

Two clarifications are needed. First, norms can function effectively as a coordinating and incentivizing device because of their institutional characteristics as *public* and *shared* rules of behaviour. The decentralized collective punishment could not function effectively if norms did not possess the specific institutional features that enabled them to *publicize* a normative classifying logic. Hadfield and Weingast identify the attributes of norms as generality, stability, clarity, and impersonality. Second, because the common logic supports the incentive to participate in collective punishment (even when others suffer the consequences of the single violation), *the individual has a diminished incentive to free ride on others' enforcement efforts*. Crucially, the individual incentive to punish norm violators is linked to the effect of the enforcement of sanctions imposed on other people's beliefs. The failure to administer punishment would send the signal that the equilibrium with punishment is no longer sustainable or individually

^{50.} *Ibid* at 479. ("A logic is an institution, not a disembodied classification scheme.")



^{49.} See Hadfield & Weingast, "What is Law?," *supra* note 45 at 473 ("[A] normative classification scheme that designates some actions as 'wrongful' [punishable, undesirable]").

advantageous, thereby diminishing the deterrence of violations and the incentives to punish. Thus, norm beneficiaries have the incentive to enforce sanctions because they directly internalize (part of) the costs of not punishing norm violators. In brief, the collective action problem exists, but it is mitigated by the incentive to signal the efficiency of the cooperative equilibrium.

V. Limitations

The analysis up to this point has focused on the advantages of SL, the conditions for its efficiency, and the mechanism underlying spontaneous legal change. This section briefly examines the cost-benefit structure of SL to identify its principal limitations.

A. Agency Costs

The lawmaking process can be conceptualized as a principal-agent relationship between the people who are subject to the law and the lawmaker, to whom the people delegate the power to produce the legal rules. Generally, differences in incentives between the people who are subject to the law and the lawmaker, as well as the difficulties confronted by the former in observing the behaviour of the latter, create room for severe agency problems that affect the quality of the production of the law ("agency costs"). Generally, the centralization of lawmaking exacerbates the incentive misalignment associated with the principal-agent relationship, thereby dramatically increasing the magnitude of the agency costs associated with lawmaking. In this respect, SL has a relative advantage over centralized mechanisms. Because, as previously emphasized, norm producers coincide with norm beneficiaries, in SL, there is no principal-agent relationship between the lawmaker and the people who are subject to the law. This represents one of the major comparative advantages of SL over centralized lawmaking processes.

Despite these advantages in terms of smaller agency costs, SL is not immune from rent-seeking pressures or the related risk of norm manipulation. As I will clarify in the following subsection, a necessary condition for a norm to emerge and persist over time is that a minimum number of community members are willing to enforce the norm in cases of its violation. That is, norm emergence does not generally require unanimous support by community members. At the same time, however, once a norm has emerged and is enforced by the group members, it produces binding effects on all community members. Consequently, although customary law and social norms rest on a widespread consensus, there remains a portion of the population that is subject to them but whose preferences or interests diverge from those underlying the existing norms. Therefore, despite the absence of a principal-agent relationship between the lawmaker and the people who are subject to the law, there remains room in SL for cost externalization by one group at the expense of others. This opens the door to rent-seeking pressures by special-interest groups that have the capacity to influence the emergence of a norm with an in-built bias in their favour.



However, the interest groups' incentive to manipulate SL does not entirely explain why norms and customs are vulnerable to particularistic pressures. It is necessary to explain how rent-seeking pressures by organized minority groups can succeed in manipulating a lawmaking process that is based on the willingness of a large number of individuals to act as norm enforcers. The vulnerability of spontaneous norms to particularistic pressures rests on the bounded rationality and limited information of individuals.⁵¹ As previously observed, the process of norm emergence is triggered by a minority group of change agents who influence the flow of information that is accessible to the general audience. Change agents create the conditions for the informational cascades and bandwagon effects that are at the heart of norm emergence. It is easy to see that when interest groups, which enjoy organizational superiority over the unorganized members of the general audience, are in a position to control or influence change actors, they can also influence the process of norm emergence.

Furthermore, in the absence of centralized coordinating devices, limited information and bounded rationality might cause individual actors to follow inefficient norms. This may result in the consolidation of norms based on the suboptimal use of available information and on the failure to aggregate relevant information. In such cases, social norms stabilize Pareto-inferior states. Moreover, the lack of a centralized lawmaker in some cases might exacerbate the tendency of some groups to consolidate standards of behaviour that maximize the welfare of the group at the expense of outsiders—that is, norms that impoverish outsiders more than they advantage insiders. Examples of this are norms of loyalty among members of criminal groups (which strengthen the groups at the expense of outsiders) or norms governing anticompetitive practices undertaken by members of a cartel (which impair competition and extract consumers' surplus).

B. Enforcement Costs

Norms emerge and persist over time to the extent that a critical number of community members take part in collective enforcement. If the number of enforcers does not reach the critical threshold required for the emergence of new Pareto-superior norms, the community remains stuck in a suboptimal equilibrium. I call the individuals who participate in the collective enforcement process for any given existing level of enforcement cost "enforcers" or "enforcement actors." It is reasonable to assume that the group members' willingness to participate in collective punishment depends upon the enforcement costs versus the expected

^{54.} Ellickson, *Order Without Law, supra* note 6 at 169; Ellickson, "Evolution of Social Norms," *supra* note 38 at 55; Posner, "Inefficient Norms," *supra* note 19 at 1722-23; Cooter, "Decentralized Law," *supra* note 42 at 1684-85.



^{51.} Parisi, "Customary Law," supra note 28 at 22-23.

^{52.} Posner, "Inefficient Norms," *supra* note 19 at 1711-19.

^{53.} Jon Elster discusses some examples of inefficient norms in *The Cement of Society: A Study of Social Order* (Cambridge: Cambridge University Press, 1989) at 138-51 and in Elster, "Social Norms," *supra* note 26.

benefits of the enforced norms.⁵⁵ That is, the number of enforcement actors taking part in the collective punishment of norm violators is a negative function of the enforcement costs.⁵⁶ Now assume that the marginal enforcement cost (i.e., the enforcement cost borne by the marginal enforcer actor) is a negative function of the number of infra-marginal enforcers.⁵⁷ That is, for every level of enforcement actors, there is a level of enforcement costs that individuals *must* be willing to bear in order to participate in the enforcement process.

Since (1) the number of infra-marginal actual enforcers depends upon the marginal actual enforcement cost and (2) the marginal actual enforcement cost depends upon the number of infra-marginal actual enforcers, a circular, *self-reinforcing*, causal mechanism affects the emergence of norms. In fact, a marginal *increase* in the number of enforcement actors may reduce the marginal enforcement cost and attract new enforcers, thereby triggering a self-reinforcing dynamic that facilitates the spontaneous evolution of the norm. However, the same mechanism can also lead to and reinforce an evolutionary stall because a marginal *decrease* in the number of enforcing actors can trigger a circular self-reinforcing dynamic that reinforces a decrease in the number of enforcement actors. Whether this self-reinforcing mechanism facilitates or reduces the spontaneous emergence of a norm depends upon a host of factors that affect the *shape* of the curves depicting the two above-mentioned functions (i.e., marginal costs and number of enforcement actors).

For a norm to be self-reinforcing, the number of infra-marginal enforcers (determined by the level of enforcing costs) should *not* be less than the critical number of enforcers necessary to support the new norm. All else being equal, if this condition is respected, the self-reinforcing mechanism enables the norm to emerge and persist over time. Conversely, if the number of actual infra-marginal enforcers is below the critical number of enforcers, then the norm is not supported by a self-reinforcing mechanism and therefore is prevented from coming into force. Initially, when changing actors introduce a new norm, the number of actual infra-marginal enforcers is below the critical number of enforcers. The mechanisms of norm emergence illustrated in the preceding section enable the community to gradually reach the critical level of self-enforcement that is required to support a new norm.

^{55.} I implicitly assume that the marginal costs of participating in decentralized enforcement do not exceed the marginal costs of participating in other types of collective lawmaking processes.

^{56.} Cooter, "Decentralized Law," *supra* note 42 at 1670.

^{57.} This is consistent with the fact that people's preference for cooperation is conditional on other people's cooperative behaviour. The same assumption is made in Cooter, "Decentralized Law," *supra* note 42 at 1669-75. A more complex account of the reality would consider that the individual decision to participate in the enforcement process depends upon the belief that (1) a sufficient number of other individuals enforce the norm and (2) a sufficient number of other individuals expect him or her to enforce the norm.

^{58.} If the number of enforcement actors increases, the marginal enforcement cost decreases; the lower the marginal enforcement costs, the higher the number of enforcement actors, which facilitates norm emergence and persistence over time.

^{59.} If the number of enforcement actors decreases, the marginal enforcement cost increases; the higher the marginal enforcement costs, the lower the number of enforcement actors, which impedes the evolution of the norms.

It follows from the foregoing that the relative efficiency of SL over centralized lawmaking is a function of the determinants of the enforcement costs. Once this is recognized, the central issue becomes identifying the environmental conditions that reduce the enforcement costs, thereby facilitating the process of reaching the critical level of infra-marginal enforcing actors. If these conditions are present, then SL is a good candidate for being an efficient lawmaking process. Otherwise, it will likely be incapable of allowing the emergence of potentially available Pareto-superior norms. In conclusion, the assessment of the efficiency of SL presupposes the identification of the characteristics of the regulated environment that reduce the enforcement costs (thereby increasing the level of self-enforcement). The literature on this point is sparse, and much work remains to be done. It seems, however, that the previous analysis of the formation process of SL provides useful hints on the determinants of enforcement costs.

Based on previous assumptions, the microeconomic reasoning suggests that the attainment of the critical number of enforcers depends upon (1) the *elasticity* of the number of enforcement actors with respect to the enforcement cost and (2) the elasticity of the enforcement cost with respect to the number of enforcement actors. Some important factors determining (1) and (2) are likely to be (a) the cost of information in the regulated environments and (b) the receptiveness of general audience members to new technical information. First, in an environment in which the costs of disseminating information among group members are relatively low, it is easier for change actors to create the conditions for a cascade toward a new norm. Close-knittedness reduces the information costs, thereby increasing the elasticity of the number of enforcing actors with respect to the enforcement costs. Second, the receptiveness of group members to new technical information may depend on many factors. It is likely that the internalization of norms increases the costs for change actors to challenge the status quo and reduces the propensity of group members to appreciate new technical information. 60 Thus, in this latter respect, the environments that are characterized by strong norm internalization are likely to be less adaptively efficient than those with weaker norm internalization. Another factor that undermines people's receptiveness to new technical information is that people are generally loss averse: they value prospective losses more than they value prospective gains. Therefore, the attitude toward the risks of community members with respect to technological change is likely to affect the adaptive efficiency of SL.

C. Moving from a Local to a Global Optimum

An important limitation of SL is associated with the difficulties of moving from a *local* to a *global* optimum.⁶¹ In fact, the proximity of a local optimum often hampers the attainment of a global optimum. This type of evolutionary stall occurs

^{61.} Cooter, "Decentralized Law," *supra* note 42 at 1687-88; McAdams, "The Origin," *supra* note 26 at 411; Posner, "Inefficient Norms," *supra* note 19 at 1711-13; Parisi, "Spontaneous Law," *supra* note 8 at 215.



^{60.} Ellickson, "Evolution of Social Norms," *supra* note 38 at 56.

when the set of individual preferences is *non-convex*. When a preference set is convex, a single peak represents the global optimum point. Therefore, each local improvement reduces the distance to the global maximum. Conversely, in a non-convex set of preferences, several peaks represent a local optimum with respect to the local set of preferences. Only one is the global maximum (i.e., the efficient norm). This type of preference set is highly problematic because when the group moves away from the local optimum it experiences a decline in social welfare. Only if the group keeps moving away from the local optimum it will reach a point of increasing returns. Only then the move toward the efficient norm will be facilitated by the increasing net benefits of the legal change. But before reaching the point of increasing returns, it is likely that many group members who face immediate utility losses will abandon the group and decide to adhere to the status quo (i.e., the local optimum), thereby impairing the collective attainment of the global optimum.

An example of the evolutionary stall caused by the difficulties of moving away from a local optimum is the transition of national states toward adherence to international measurement standards. The adoption of international measurement standards generates efficiency gains in the long run because it reduces the transaction costs associated with international commercial exchanges or transactions. However, abandoning the local measurement standards generates immediate adaptation costs that individuals might be reluctant to sustain on a voluntary basis. To illustrate this point, Cooter provides the example of the possible transition from the British system of weights and measures to the metric system or from the British "drive on the left" rule to the "drive on the right" rule, which is more common internationally. Even if these transitions were likely to generate efficiency gains for the country, they would face large resistance because upfront utility losses discourage voluntary transitions. There are many other examples of local rules that have become (globally) inefficient as a result of the increasing degree of integration of the European Union. 62

D. Lock-In Effect

A severe lock-in effect undermines the efficiency of the law-making process. The lock-in effect is generated by the increasing returns from legal compliance, which are, in turn, the result of the learning scales and network externalities associated with prolonged compliance by the community.⁶³ The increased value of legal rules generated by prolonged compliance raises the opportunity cost of migrating to a new legal regime and makes the individual's solitary transition to a new legal rule too risky an option. Each individual is unwilling to transition from the old to the

^{62.} On this point, see Jozef Niznik, ed, *The Normative Environment of European Integration Social, Political and Cultural Obstacles to Compliance with European Norms* (Warsaw: Ifis Publishers, 2008).

^{63.} Stan J Liebowitz & Stephen E Margolis, "Network Externality: An Uncommon Tragedy" (1994) 8:2 J Econ Perspectives 133; Michael Klausner, "Corporations, Corporate Law, and Networks of Contracts" (1995) 81:3 Va L Rev 757; Mark A Lemley & David McGowan, "Legal Implications of Network Economic Effects" (1998) 86:3 Cal L Rev 479.

new legal regime "without assurance that a critical mass of potential users will do likewise" (despite the fact that under the new circumstances, the consolidated legal path might be a sub-optimal solution). ⁶⁴ This is the so-called "lock-in effect": incentives to shift to a Pareto-superior legal regime are undermined by the increased value of the existing law as an effect of prolonged compliance. ⁶⁵ Stated differently, holding everything else constant, increasing returns from compliance make people who are subject to the law increasingly change-averse.

Lawmaking centralization facilitates the overcoming of the lock-in effect. The presence of a centralized lawmaker facilitates the dissemination of information about the superiority of the new legal rule. Moreover, the centralized production of legal rules that are binding on all community members helps to generate the "expectation" (if not the assurance) of the transition to the new legal regime by a sufficient number of people. 66 Finally, centralization incentivizes the "simultaneous movement" to a superior legal regime by threatening sanctions for violations of the new legal standards. In brief, the promulgation of legal rules by a centralized lawmaker provides a focal point around which people can coordinate their compliance decisions, thereby reducing the fear of a solitary transition and facilitating the collective migration to the new equilibrium. Conversely, SL tends to exacerbate the lock-in effect. As repeatedly emphasized, in the absence of centralized institutions, signalling the benefit of new legal standards is a costly activity that is affected by collective action problems, with the result being that the signalling is often undersupplied. Decentralized efficient legal change requires the concurrent presence of many conditions, including the presence of "norm entrepreneurs," for low information costs, and general audience members' receptiveness to new technical information.

VI. Examples of the Spontaneous Emergence of Private Law

This section briefly discusses examples of SL in the area of private law. I am unable to explore each of these observations fully within the confines of this article. The limited purpose is to provide the reader with a flavour of the analytical potential of my proposed framework.

A. The Lex Mercatoria in Medieval Europe

The system of trade customs and dispute resolution that regulated transnational commercial activity in medieval Europe—the so-called *lex mercatoria*—provides

^{67.} Gillette, "Lock-In," supra note 21 at 835.



^{64.} Gillette, "Lock-In," supra note 21 at 818.

^{65.} Compliance with the law increases as the individual's expected benefit from compliance increases; in turn, the expected benefit might increase as a result of other people following the rule although the content of the rule does not maximize economic efficiency.

^{66.} Gillette, "Lock-In," *supra* note 21 at 824 ("Legal rules [...] are promulgated by a central authority [a court or legislature, for current purposes], and are thereafter binding on all within the authority's jurisdiction. The presence of the central authority reduces uncertainty, typically present with technological lock-in, about the willingness of others in the network to adopt the superior standard").

an example of SL in the absence of centralized lawmaking authorities under conditions of stochastic symmetry and induced reciprocity. The lex mercatoria developed within the merchants' community in response to the increasing expansion of *long-distance* trade relationships, in which merchants had to entrust payments or the delivery of goods to persons who were removed in time and space. The community of merchants extended to Europe, North Africa, and Asia Minor. In this emerging transnational context, the creation of norms by small. highly localized communities was inadequate to provide transactional security. Local authorities did not have the knowledge to devise efficient rules to support transnational commerce. Instead, an international community of medieval merchants possessed the capacity and the appropriate incentives to develop rules that established efficient standards of behaviour. This enabled a great expansion of the scope of international trade. Institutions such as the merchant guilds and law merchant, which arose prior to the birth of nation-states (and centralized lawmaking processes) in Europe, enabled the community of medieval merchants to regulate the fluid and evolving context of the commercial revolution.⁶⁸

First, as Parisi emphasizes, "[T]he stochastic symmetry of the relationship between medieval merchants eliminated the parties' incentives to articulate one-sided rules." Medieval merchants acted as both buyers and sellers and, therefore, had no incentive to promote systematically biased rules that favoured one party: "[the] condition of role reversibility changed a *structurally* asymmetrical situation (buyers versus sellers) into one that was *stochastically* symmetrical (merchant versus merchant)." Second, the reciprocity power among trading partners was such that the merchant who failed to comply with customary standards of behaviour (e.g., by not delivering goods or not fulfilling contractual obligations) was denied access to the trading community. Hence, by excluding defectors from future access to the community's goods and profit, the reputational mechanism altered the incentives to either cheat or comply with contractual obligations, thereby "placing future contracting in the shadow of the law."

In short, the commercial environment in medieval Europe possessed the structural characteristics of close-knittedness (power reciprocity among traders,

^{71.} Ibid.



^{68.} Leon E Trakman, *The Law Merchant: The Evolution of Commercial Law* (Littleton, CO: FB Rothman, 1983); Bruce L Benson, "The Spontaneous Evolution of Commercial Law" (1989) 55:3 Southern Econ J 644; Avner Greif, "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition" (1993) 83:3 Am Econ Rev 525; Avner Greif, *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade* (Cambridge: Cambridge University Press, 2006); Paul R Milgrom & Douglass C North, "The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs" (1992) 2:1 Economics and Politics 1; Avner Greif, Paul Milgrom & Barry R Weingast, "Coordination, Commitment, and Enforcement: The Case of the Merchant Guild" (1994) 102:4 J Pol Econ 745. More recently some authors have cast doubt on the customary nature of the mediaeval *lex mercatoria*. See, for example, Celia Wasserstein Fassberg, "Lex Mercatoria: Hoist With Its Own Petard" (2004) 5:1 Chi J Int'l L 67 (arguing that the "idyllic image of an international community of merchants interacting on the basis of shared values," is not supported by the historical evidence that "the law merchant was not substantive, but rather procedural law, that it was neither transnational nor personal, [and] that it was very probably not customary").

^{69.} Parisi, "Spontaneous Law," supra note 8 at 218.

^{70.} *Ibid* [emphasis is mine].

long-term relationships, and adequate knowledge and information) *despite* the transnational dimensions of the trade community. The crucial problem faced by merchants was the costliness of information about the histories of trading partners, which hampered the commitment necessary to support economic activity. In response to this problem, the institutional setting supplied by the *lex mercatoria* provided a regime of information gathering and dissemination with the capacity of "making of reputations a transferable good, or 'bond', within the community of traders." The decisions of merchant judges in previous trade disputes were recorded, thereby reducing the costs of monitoring the history of potential trading partners. In this manner, the *lex mercatoria* supported a reputational mechanism that enabled merchants to secure credible commitments.

B. International Commercial Law

In the second half of the twentieth century, the expansion of transnational activity was under increasing pressure by the state-supplied legal institutions governing international trade. The national regimes proved inadequate to meet the increasing demand for the efficient regulation of transnational commercial activity. During this period, "transnational economic actors increasingly [took] for granted the notion that national regimes [made] it more, not less difficult for them to achieve efficiency and predictability in their relations with one another."⁷³ For this reason, during the final decades of the twentieth century, transnational commercial actors generated a new transnational legal system that was based on international customs, usages, and practices, as well as on international commercial arbitration. This private legal system has been called the new *lex mercatoria* because of its structural resemblance to the medieval Law Merchant: it is a self-regulatory regime of internal commercial trade that is global in reach and has emerged from merchant practices.

For our purposes, two elements are worth noting. First, actors who trade across borders have created this new legal order to avoid the costs and inefficiencies of a system that is based on national laws and jurisdictions. Second, the new *lex mercatoria* is the result of a private lawmaking process. Trade actors increasingly refer to the principles of the *lex mercatoria* through explicit choice-of-law contractual provisions and select international commercial arbitration procedures (as a method of adjudicating their future disputes) through choice-of-forum clauses. Third, the aim of the new *lex mercatoria* is to develop a *unified* set of contractual rules regulating transnational commercial activities. Crucially, the standardization of contractual practices is pursued through a bottom-up process based on the choices of norm beneficiaries and the work of the dispute resolution procedures that are administered by merchants who have been chosen for their expertise. Thus, the *lex mercatoria* offers an example of the attainment of legal unification *without* lawmaking centralization. Fourth, the spontaneous

^{73.} Ibid at 633.



^{72.} Alec Stone Sweet, "The New Lex Mercatoria and Transnational Governance" (2006) 13:5 Journal of European Public Policy 627 at 630.

nature of lawmaking allows for the production of *substantive* legal rules based on trade usages and practices. This body of law has proved more effective than national contract laws in meeting the need for certainty and efficiency in international trade. In particular, compared to national civil and commercial codes, *lex mercatoria* has proved much more adaptive to the evolving structure of market relationships. Finally, a system of private, competing, transnational arbitrators has evolved, thereby enabling traders to choose among a range of alternative adjudication mechanisms to litigate transnational contract disputes.

C. Comedians' Copyright

The protection of intellectual property rights is another area of law in which SL has been capable of operating efficiently, sometimes managing to remedy the shortcomings of centralized lawmaking processes. A significant comparative advantage of SL in this area depends upon the high heterogeneity of creative practices, which generate a highly heterogeneous demand for legal protection, thereby raising the maladaptation costs of the one-size-fits-all regulations that are typical of centralized lawmaking processes. Furthermore, SL proves advantageous in reducing agency costs and improving adaptive efficiency in an environment that is characterized by a high rate of technological innovation.

A successful example of SL in the area of intellectual property rights, which has been created by a community of comedians in the last half of the twentieth century, is the system of social norms that protects comedians against theft. Oliar and Springman analyzed this phenomenon, demonstrating that it has remedied some of the shortcomings of formal law and increased the level of investments in comedic generative activity. Whereas formal copyright did not offer effective protection for stand-up comedians, the informal system of intellectual property norms, created by the community of comedians, has efficiently regulated the ownership, transfer, and appropriation of jokes.

The community of comedians exhibits many of the characteristics of close-knittedness. First, esteem from comedians' professional community and enhanced public reputation provide strong incentives to disfavor appropriation and to create original jokes. Second, members of the stand-up community are often willing to incur personal costs to enforce social norms and forestall appropriation. As Oliar and Springman emphasize, "comedians who are present in a comedy club performance look for 'infringement,' not only of their own material, but of others in the community, and report and police violations." This appears consistent with Hadfield and Weingast's signalling theory of law enforcement. Members of the stand-up community participate in the collective enforcement of norms to reinforce the empirical and normative expectations of other community

^{76.} Ibid at 1836.



^{74.} Michael W Carroll, "One for All: The Problem of Uniformity Cost in Intellectual Property" (2006) 55:4 AU L Rev 845.

^{75.} Dotan Oliar & Christopher Sprigman, "There's No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy" (2008) 94:8 Va L Rev 1787.

members regarding the standards of behaviour that are socially disapproved and sanctioned. Finally, media coverage and constant online monitoring by the public ensure common knowledge and information among community members about the historical behaviour of comedians, thereby rendering unattainable the payoff from unilateral defection.

D. Collective Rights Organizations

In many industrial sectors, repeated transactions among firms have generated the spontaneous creation of legal norms to protect intellectual property rights. For instance, collective rights organizations (hereinafter "CROs") set the rules of exchange for firm industries, thereby allowing for a significant reduction of transaction costs. Compared to centralized, top-down, public lawmaking processes, these spontaneous rule-producing mechanisms entail significant advantages. Because the outcome of these spontaneous processes is private in nature (i.e., it is not a collective process that is subject to coercive procedures established by the law), 77 private actors can produce rules that are tailored to their specific needs. Those who produce the rules (i.e., the firms operating in the music industry) are those who benefit from and are regulated by the rules. Compared to centralized legislative processes, this allows for superior information about local preferences, lower rent-seeking costs, and more flexibility and adaptivity.

Merges provides a useful analytical framework for the study of CROs, 78 which emphasizes the comparative advantages of these privately organized solutions compared to legislators and courts. The author discusses the example of the creation of a digital encyclopaedia of quilting that requires the producers to obtain legal clearance from the different owners of intellectual property rights of the various pieces of material to be assembled. In this context, the individual bargaining around the terms and conditions of property rights with each owner would generate prohibitive transaction costs. The organization of an electronic centralized market would not avoid the holdout problems posed by strategic sellers. An alternative solution would be the creation of a compulsory statutory licence. However, the statutory provision of a mandatory licence would entail a host of problems. First, the legislators would have to identify the content (e.g., the material object) of the licence and establish the relative royalties to be paid to the owners. This would entail the difficulty of placing a value on property rights through centralized lawmaking procedures, and politicians would seldom know if the prices they set were the right ones. The centralized lawmaking process would establish a one-size-fits-all schedule of royalties that entailed maladaptation costs to the extent that the underlying structure of property rights would be heterogeneous.⁷⁹ Second, the political process

^{79.} The creation of intellectual content to be protected by property rights is highly heterogeneous, and the ex ante centralized structure of political lawmaking is ill suited to efficiently tailor the contents of the compulsory licence.



^{77.} I examined the implications of the collectivization of the lawmaking process in Bertolini,

[&]quot;Theory of Law," *supra* note 3.

78. Robert P Merges, "Contracting into Liability Rules: Intellectual Property Rights and Collective Right Organizations" (1996) 84:5 Cal L Rev 1293 at 1299.

would trigger rent-seeking pressures by various interest groups to influence the contents of the compulsory licence. This would, in turn, entail rent dissipation and rent extraction, which would deplete the economic surplus. Third, once approved by the legislature the schedule of royalties would likely become locked in. In fact, once the statute is enacted and politicians have assigned the rents to successful interest groups, the mechanism of the transitional gains trap would prevent efficient legal change. ⁸⁰ In brief, the political lawmaking process would entail information, agency, and adaptive efficiency costs that would result in the depletion of part of the available surplus.

Unlike a publicly centralized process, privately organized institutions, such as CROs, "could probably work out something much more in tune with their needs than a [legislative] scheme of one-size-fits-all transactions." Under the pressure of the repeated need for transactions, the actors involved would have the incentive to establish transaction cost-reducing mechanisms for setting royalties and resolving disputes: "Whatever institutional structures the content owners and users devised, they would reflect the expertise of these industry insiders. Even more important, they could be changed over time by industry participants. For these reasons, private, voluntary organizations of this kind would be superior to state-mandated compulsory licenses."

E. Patent Pools

The creation of patent pools in the automobile and aircraft manufacturing industries provides another interesting example of SL in the area of private law. A patent pool is an agreement between firms in an industry sector to license to one another one or more of their patents covering the use of technology in the industry. This mechanism of reciprocal licensing concessions significantly lowers the transaction costs through the institutionalization of the repeated-play nature of the exchange between them. These privately made institutional arrangements are designed to facilitate the conditions of close-knittedness by "creating the occasion for repeat-play, reciprocal bargaining, versus more costly one-shot exchanges." In essence, patent pools work as a reciprocity-inducing mechanism, thereby placing future contracting in the shadow of the repeated-play bargaining game between firms.

Patent pools allow for significant comparative advantages over centralized legislation. They enable firms to supplant the process of individual bargaining in each single transaction (based on the statutory property rule) with a privately organized mechanism that regulates repeated transactions over time. Under

^{83.} Ibid at 1294.



^{80.} Gordon Tullock, "The Transitional Gains Trap" (1975) 6:2 Bell J Econ 671. Tullock explains that once an inefficient regulation has been enacted as a result of short-term rent-seeking pressures, the future cancellation of the conferred monopolistic rents become increasingly difficult to implement politically, despite the fact that the gains to successors of original beneficiaries have been eroded by market adjustments.

^{81.} Merges, "Contracting," supra note 78 at 1299.

^{82.} *Ibid.*

patent pool agreements, the royalties charged for the patented technologies are established directly by patent owners based on the relevance of the technology to the production process. This avoids the informational problems associated with centralized estimates of relative prices. As Merges emphasizes, quoting an excerpt from a congressional patent-pooling hearing, patent pools are based on the principle that "within the industry, the individual monopoly created by patents is abolished in the form it is provided by statute and a different system is substituted more in harmony with the needs of that industry."⁸⁴ In this respect, the Department of Justice has recognized that patent pools can have significant pro-competitive effects and may improve firms' competitiveness in an era of rapid technological innovation.⁸⁵

F. Medical Malpractice

In many jurisdictions, negligence standards for medical malpractice are based on a doctor's compliance with medical custom as established by professional associations. In this respect, the area of medical malpractice provides a useful example of the spontaneous emergence of efficient behavioural standards in a regulated environment that is characterized by high levels of technical complexity and specialized knowledge. It also shows that, in some cases, compared to agencies and bureaucracies, SL can benefit from greater technical expertise concerning the regulatory issue that is at stake. This is because, in the absence of delegation to a centralized lawmaker, the actors operating in the regulated environment have the opportunity to participate *directly* in the creation of the law.

The reliance on medical custom in establishing negligence standards probably explains doctors' informational advantage over potential alternative regulatory entities, coupled with their incentives to establish efficient precautionary standards in response to litigation pressures. In the area of medical malpractice, the delegation of the regulatory authority to agencies would dramatically raise agency costs, without significantly increasing the technical expertise or information available to the lawmaker

G. Product Liability

SL might prove advantageous in setting the efficient negligence standard of the liability regime for defective products. The injury caused by a defective product is related to a transaction between the injurer and the victim. ⁸⁶ Because the tort occurs in the context of a seller-customer relationship, "firms' behaviour is influenced not only by potential legal liability, but also by customers'

^{86.} Steven Shavell, *Economic Analysis of Accident Law* (Cambridge: Harvard University Press, 1987) at ch 3.



^{84.} *Ibid* at 1343.

^{85.} Jeanne Clark, Joe Piccolo, Brian Stanton, Karin Tyson, *Patent Pools: A Solution to the Problem of Access in Biotechnology Patents?* (2000) US Patent and Trademark Office, at 6 http://www.uspto.gov/patents/law/patent pools.pdf.

perceptions of product risks, for the latter will affect customers' willingness to make purchases." Here, the *repeated-play* element occurs between firms and the overall class of consumers. This incentive structure allows for a greater role of SL in the area of product liability. 88

First, the reputational element is intensified in the consumer protection context. Firms know that the reputational consequences of injuring one or more consumers might be significant. Litigation cases involving product liability receive significant attention in the media, especially when they concern widely sold products. In addition, informational and reputational cascades may quickly determine changes in the public's perception of risk. Second, given the large number of consumers involved, the wrongful conduct is more likely to be detected because monitoring costs are lower. Third, the presence of common regulatory interests among consumers facilitates their coalescence and coordination. These environmental conditions facilitate the functioning of private regulatory systems aimed at mitigating the opportunistic behaviour of manufacturing industries. Even in the absence of a state-mandated liability rule, firms are motivated to invest in product safety to the extent that harm to consumers may cause boycotts.

The Japanese product liability system, which was in force until 1995, represents a significant historical example of a nongovernmental product liability system. Until 1995, product liability in Japan was formally subject to a general negligence regime. However, many Japanese firms voluntarily subjected themselves to a *strict* liability regime. The spontaneous emergence of a strict liability regime was based on three constitutive elements: safety standards, testing, and insurance. A public entity, the Product Safety Council, 89 set the safety standards for a variety of products, and manufacturers submitted their products to the Council for safety assessments. If the submitted product met the safety standards, the firm could attach a "safety goods" (SG) label. In contrast, if the product failed the test, the firm could simply sell it without the label. Upon the payment of a fee, the manufacturers who wanted to bundle product liability coverage with their products could submit their products to the Council for certification under the SG system. The Council would test the products, and if they met its safety standards, SG insurance would be offered. The Council insured products with the SG label by charging an insurance premium. Under SG insurance, the Council would specify the amounts payable to the users who were injured by defective SG goods. The firms that did not want to bundle products liability insurance with their products could sell their products without insurance coverage. Under this institutional framework, many Japanese firms had incentives to offer insurance

^{87.} Ibid at 51.

^{88.} I have examined the comparative advantages of spontaneous lawmaking with respect to the regulation of product liability in Daniele Bertolini, "Taking the Costs of Consent Seriously: An Alternative Understanding of Legal Efficiency" (2015) 28 J Juris 375.

^{89.} In 1973, the Diet enacted the *Consumer Products Safety Act* and, through it, established the Product Safety Council. The Act provided for a very limited mandatory regime. The Council was mandated to set safety standards for a few hazardous categories of products and was authorized to ban those products that did not meet the standards.

coverage as a signal to buyers of the quality and safety of their products. To attract consumers despite the formal law establishing negligence standards for liability, many Japanese firms agreed to be subject to a strict liability regime. The enforcement mechanism was based on a centralized public authority, but the creation of the liability regime was activated by the spontaneous choices of the manufacturing industries.

H. Industry Self-Regulation: The Case of International Product Standards

Thus far, I have assumed that SL rests on decentralized processes of norm creation. However, in some cases, SL can also take the form of an ex ante centralized production of law. The classic example is industry self-regulation, in which firms belonging to the same industrial sector entrust the production of the norms regulating their economic activity to centralized lawmaking bodies that act as private legislatures. Ex ante centralized SL processes allow for the economic advantages of ex ante centralization (e.g., economies of scale and scope, legal uniformity, and so on) while simultaneously reducing the costs typically associated with political lawmaking (e.g., rent-seeking costs). First, relative to political legislators, self-regulating actors have superior knowledge of the regulatory issues at stake: producers operating in the industry sector are likely to possess greater competence than politicians in industry production processes. 90 Second, "[t]he delegation of lawmaking powers to the industry improves the quality of law by enhancing the responsiveness of regulators to the *uncertainty* that is inherent in the implementation of institutions." Therefore, the greater the uncertainty in the regulatory environment, the greater the expected benefit of self-regulation in terms of enhanced flexibility.

These informational advantages are derived at the expense of opportunistic behaviour by industries, especially in economic sectors in which a sharp divergence of interests exists between consumers and producers. 92 Indeed, self-regulation is not immune from the agency problems associated with the centralization of lawmaking. In particular, industry-made regulation entails systematic regulatory biases toward industries, which might be detrimental to consumers to the extent that the latter suffer from organizational disadvantages. However, compared to political processes, the agency problems associated with self-regulation are mitigated by the greater *proximity* of the lawmaker to the people who are subject to the law. For example, the phenomenon of rent extraction that is associated with political lawmaking is drastically reduced in SL processes. 93 Furthermore,

^{93.} Fred S McChesney, Money for Nothing: Politicians, Rent Extraction, and Political Extortion (Cambridge: Harvard University Press, 1997).



^{90.} Thomas Gehrig & Peter J Jost, "Quacks, Lemons, and Self-Regulation: A Welfare Analysis" (1995) 7:3 J Regulatory Econ 309; Kathleen Segerson & Thomas J Miceli, "Voluntary Environmental Agreements: Good or Bad News for Environmental Protection?" (1998) 36:2 J Env'l Econ and Management 109; Stefanadis Christodoulos, "Self-Regulation, Innovation, and the Financial Industry" (2003) 23:1 J Regulatory Econ 5.

91. Peter Grajzl & Peter Murrell, "Allocating Law-Making Powers: Self-Regulation vs.

Government Regulation" (2007) 35:3 J Comp Econ 520 at 522 [emphasis mine].

^{92.} Ibid at 522.

private legislatures, unlike public ones, are more likely internalize at least in part the costs and benefits of the legal rules they produce. This provides an incentive to contain opportunistic behaviour.⁹⁴

An example of industry self-regulation is the creation of product standards by industries to solve compatibility problems in internationally integrated goods. The International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and other private international organizations produce global standards aimed at overcoming the technical barriers generated by technological incompatibilities. 95 Examples include differences in voltage standards for electric devices, differences in television broadcast formats, incompatibility of software written for one operating system with other operating systems, and so on. These incompatibilities can be the source of economic inefficiencies and welfare losses. For example, the presence of technical incompatibilities reduces the variety of integrated market goods; in addition, it increases production costs by hindering the attainment of economies of scale and prevents the exploitation of network externalities. Many problems of technological incompatibilities are solved through the work of private international standardizing bodies (e.g., ISO and IEC). These are examples of how spontaneous private lawmaking can successfully meet the demand for regulation. Moreover, the case of international standardization illustrates the limitations of public legislative authorities in dealing efficiently with the demand for regulation and the complementary role played by SL processes.⁹⁶

Finally, the example of international standardizing bodies also illustrates the limitations of private lawmaking. First, the problem of non-convexities often arises in the setting of industrial standards, especially in cases of technical barriers between old and new technologies. The manufacturers of the old technology tend to oppose the introduction of new compatibility standards that would displace (or increase the retail prices of) products that use the old technology. When convergence on a superior standard is possible only through the cooperative behaviour of the market incumbents, the opposition of the latter might prevent or inhibit the attainment of appropriate compatibility standards. Second, private international standardization can generate significant externality problems. Standards organizations are privately funded, and this exposes standardizing bodies to the risk of being captured by a restricted number of powerful industries. In turn, this exposes standardization activity to the risk of being a means of restricting competition. Third, standards organizations are exposed to a pervasive collective action problem. Because the benefits of standardization are indivisible, firms will prefer to let others sustain the costs of the collective effort toward product standardization.

^{96.} *Ibid* at 87-109.



^{94.} In particular, self-regulatory entities face the incentive to limit the bias in favour of producers below the level of costs that might trigger a consumer's reaction.

See AO Sykes, Product Standards for Internationally Integrated Goods Markets (Washington, DC: Brookings Institution Press, 1995).

Conclusions

The organization of the sources of law should be based on a comparative institutional analysis of alternative lawmaking mechanisms. The discussion in this paper suggests that, under certain conditions, SL has *efficiency advantages* over other sources of law. First, the absence of the delegation of lawmaking authority to a centralized institution increases the responsiveness of SL to the preferences of the people who are subject to the law. Second, the norm producers internalize the costs of law-making, which raises the cost of their irrational behaviour, thereby generating incentives for rational law-making. Finally, the direct participation of the people who are subject to the law in the formation process of norms reduces the rent-seeking pressure by special interest groups that typically affects political and bureaucratic lawmaking.

The environmental *conditions* under which SL is most likely to be conducive to efficient norms are (1) power reciprocity among community members, (2) continuing relationships and a sufficiently high discount factor, (3) adequate knowledge and information about the reputations of community members, and (4) actors' ability to promptly punish defection. Structural reciprocity, which facilitates the conditions for cooperation, is associated with environments that are characterized by role reversibility. Reciprocity can also be institutionally induced.

The *process* of the spontaneous emergence of law can be explained based on three hypotheses: (1) change agents trigger informational and reputational cascades converging toward the new norm; (2) norm internalization enables norm enforcement by overcoming collective action problems; and (3) legal rules supply a common logic for the normative classification of wrongful conduct, thereby operating as a coordinating device.

SL suffers from *limitations* that are rooted in the limited information and bounded rationality of single individuals. Spontaneous norms (1) can be manipulated by special-interest groups, (2) can fail to evolve toward Pareto-superior regimes because of exceedingly high enforcement costs, (3) can fail to evolve toward efficiency because of the incentive problem associated with moving from a local to a global optimum, and (4) can exacerbate the lock-in effect that is generally associated with increasing returns from prolonged legal compliance. In the absence of centralized coordinating devices, the possibility of overcoming these evolutionary traps largely depends upon group members' ability to communicate cheaply with one another and coordinate a collective move toward the efficient legal regime. This, in turn, depends on various environmental variables, such as the costs of information in the regulated environment, people's receptiveness to new technical information, the degree of norm internalization, and the loss aversion of community members.

Under the specific environmental conditions identified above, the shift of lawmaking activity from centralized law-making processes toward spontaneous forms of lawmaking can be regarded as an attractive institutional arrangement in many contexts to effectively mitigate the inefficiencies in the production of law.



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