Legal polycentrism and the circularity problem

Michael A. Wiebe

maswiebe@gmail.com

University of Manitoba

Abstract:

Legal polycentrism studies the provision of security and dispute adjudication through competing protection agencies rather than a government monopoly. To show that competition between protection agencies would have beneficial consequences, polycentrists often cite results from price theory about market competition. But there is a circularity problem here: markets presuppose a legal framework; hence before polycentrists can employ price theoretic arguments about market competition, they must first show that the legal requirements of markets are satisfied, that is, that property rights and contracts are enforced. If these requirements are not satisfied, it is illegitimately circular to draw on market competition as an argument for legal polycentrism.

I – Introduction

The theory of legal polycentrism investigates the possibility of having security and dispute adjudication services provided by competing protection agencies instead of a monopolistic government legal system. Legal polycentrists want to show that, in the absence of a governmental legal system, polycentric institutions can establish a legal framework robust enough to allow for the existence of markets. The main motivation for legal polycentrism is to give consumers of legal services the same capacity for choice that consumers of regular goods have in a market economy; it is bad if consumers have to deal with a monopoly shoe company, and it is likewise bad if consumers have to deal with a monopoly legal system.[1]

There are two methods for studying legal polycentrism. First, on the equilibrium method, we assume the existence of a polycentric legal system, then prove that it is a stable equilibrium. In other words, we want to show that given an existing polycentric system, no important actors would have a strong incentive to subvert it. Basically all of the literature on legal polycentrism has followed this approach. The second approach, the transition method, is to show how a polycentric legal system could arise out of the state of nature. Here we begin the analysis in the state of nature, that is, the absence of any formal legal institutions, and derive a market in legal services as an equilibrium outcome of the model.[2]

One common objection to legal polycentrism is the charge of circular reasoning: in attempting to explain how a polycentric legal system would work, polycentrists illegitimately assume the enforcement of property rights and contracts, when this is precisely what they need to prove. Thus Lee (2008, 18) writes: "Anarchistic libertarianism illegitimately and self-defeatingly presupposes the existence of contract law in its account of how law and its enforcement would come to exist and have an ongoing role in an anarchistic society." And Morris (1998, 65): "To

1 This article is an exercise in positive political economy. I am setting aside many normative considerations, for example, about nonaggression and libertarian rights, or the moral legitimacy of states.

2 Referring to the early public choice study of anarchy, Cowen (1992, 250-51) writes: "The "Virginia School" political economy considers the incentive to engage in predation when governmental rule of law is not present. These writers, however, do not examine systematically the provision of law enforcement through markets. Instead, they focus upon whether markets will come into existence in the first place. The focus of the Virginia School literature is logically prior to my analysis; it considers whether a feasible transition is possible from a state of nature to markets without government protection of property rights. In contrast I focus on the stability of an anarchist equilibrium." In my terminology, Cowen was following the equilibrium method, while the Virginia School literature was following the transition method.

suppose, for the purpose of demonstration, that there exists a perfectly competitive market for protective services would be, in effect, to suppose that basic security of person and goods—at least that necessary for the existence of a perfectly competitive market for protective services—is already established. The argument would be circular."[3] Although circularity is a common criticism, I claim that no one has showed specifically how it is a problem for legal polycentrism.[4] These authors grasped that circularity is a problem, but did not thoroughly examine the details.

In this paper I unpack precisely how circularity is a potential problem. To provide legal services through markets, it must be shown that the legal requirements of markets are satisfied, and in particular, that property rights and contracts are enforced. Section II discusses three ways in which polycentrists have to satisfy these requirements: the relationship between customers and protection agencies, the relationship between different protection agencies, and the legal foundation for market competition. Section III examines Long's (2008) response to the circularity problem, and Section IV considers the role informal institutions might play in solving it. In Section V, I discuss the implications of the circularity problem; above all, polycentrists are not warranted in drawing on results from price theory to argue for a polycentric legal system. Section VI concludes by introducing a new approach based on investigating the organization of violence in society.

II – The circularity problem

The dominant view in economics is that legal systems must be provided by states. Legal polycentrists propose organizing the legal system on a competitive, polycentric basis. Analytically, this task involves endogenizing the legal system: instead of assuming an exogenous legal framework, as in standard price theory, we want to derive enforcement of property rights and contracts as an equilibrium outcome of the model. That is, we want to show how a legal system could arise and persist in the first place. Hence, when discussing markets, we must be careful to explicitly show that the legal requirements of markets are satisfied. To simply assume that property rights and contracts are enforced would be to engage in circular reasoning.

There are three main ways in which circularity can be a problem for the theory of legal

3 Bear in mind that Morris's point applies with equal force to imperfectly competitive markets.

4 For other discussions of the circularity problem see Long 2008, Holcombe 2004, Kirzner 2000 (ch.4), and Buchanan 2011.

polycentrism. First, what is the legal relationship between individuals and protection agencies?[5] In a polycentric legal system, individuals make contracts with protection agencies to purchase enforcement of property rights and adjudication of disputes. But how are contracts between individuals and protection agencies enforced? It is not obvious that they would be self-enforcing; it is possible that agencies would use their enforcement power to extract taxes, or coercively prevent clients from switching to a different agency.[6] Would these contracts be enforced by other agencies? This seems to just push the question up one level, since how is *that* contract enforced?

Describing his polycentric system, David Friedman (1996, 235-36) writes: "Imagine a society with no government. Individuals purchase law enforcement from private firms. … Under these circumstances, both law enforcement and law are private goods produced on a private market." But the very act of "purchasing" requires that contracts are enforced, which in turn requires some pre-existing legal system, which is precisely what Friedman needs to show. Hence whereas Cowen (1992) takes issue with the claim that law is a private good, I contend that, since the legal requirements of markets are not satisfied, it is at least equally problematic to claim that there exists a private market.

This is a critical problem: if contracts for legal services are not enforced, then property rights will not be protected and disputes will not be adjudicated; the basic legal framework will not be established, and markets cannot develop. In other words, if contracts between individuals and protection agencies are not enforced, then the whole theory of legal polycentrism fails to get off the ground.[7]

Second, what is the legal relationship between different protection agencies? If agencies have the power to enforce contracts and adjudicate disputes, then they face the possibility of violent conflict with each other. This problem has been addressed in the literature: contra Nozick

5 It is worth noting that the term "protection agency" is somewhat problematic, since the claim that private legal agencies will be protective rather than predatory is something that must be proven, not assumed.

6 Under legal monocentrism, what is legal relationship between individuals and government? On Olson's stationary bandit theory, individuals do not contract with government, but are ruled and plundered by it. The stationary bandit, though, has an incentive to be somewhat benign in order to maximize tax revenues; see Olson 1993. In the modern world, constitutional constraints and democracy lead first world governments to treat most citizens fairly well.

7 Note that this problem is independent of and logically prior to the critique by Cowen 1992 and the subsequent debate on collusion by protection agencies. See Cowen 1994; Friedman 1994a; Cowen and Sutter 1999, 2005; and Caplan and Stringham 2003.

(1974), instead of fighting, agencies would have incentives to contract in advance to establish an arbitration network and resolve disputes peacefully. How are these contracts between different agencies enforced? It is plausible that they could be self-enforcing, based on repeated interaction and reputational mechanisms.[8] But if this is indeed the mechanism for contract enforcement, it should be explicitly argued, and it should be shown that the conditions required for repeated interaction to produce cooperation (small groups, low discount rates, etc.) are met.

The third type of circularity problem is: What legal framework provides the foundation for market competition?[9] Legal polycentrists often point to market competition as an argument for a polycentric legal system. Hence Long (2008, 133) writes: "[T]he market anarchist objection to government is simply a logical extension of the standard libertarian objection to coercive monopolies in general … because monopolies are insulated from market competition and hold their customers by force, they lack both the information and the incentive to provide consumers with fair, efficient, and inexpensive service. The anarchist accepts these arguments, and merely asks why they should apply with any less force to the provision of legal services." In other words, the standard case from price theory for competition against monopoly, taken to its extreme, is an argument for having competition in legal services as well.

Long (2008, 141) also argues that market competition provides a stronger constitutional constraint on power than any governmental constitution: "Far from eschewing checks and balances, market anarchists take *market competition*, with its associated incentives, to *instantiate* a checks-and-balances system, and to do so far more reliably than could a governmental system."[10] This is because of the standard benefits of market competition: competition between firms leads to higher quality and lower prices; unsatisfied consumers can exit and patronize other firms; new competitors can enter the market and attract away consumers, and so on. Hence market competition provides a powerful constraint on the ability of protection agencies to use force. In law as in everything else, competition beats monopoly.

The problem with these two arguments is that market competition presupposes a legal

8 On reputational mechanisms for securing cooperation in the absence of third-party enforcement, see Telser 1980 and Axelrod 2006.

9 This problem is closely connected to the first two, since competition between agencies involves how they relate to each other and to their customers.

10 Barnett 1998 (ch. 12-13) also discusses how market competition can function as a constitutional constraint on power.

framework. The economic analysis of markets—price theory—makes strong assumptions about legal institutions: it assumes that market exchange is voluntary, that property rights and contracts are enforced, and that theft and fraud are prohibited. In other words, price theory assumes that, for market participants, the cost of using force is infinite. Hence the standard price theoretic arguments for competition over monopoly only hold in the context of a pre-existing legal framework. To appeal to price theory, then, one must first show that the institutional requirements of markets are satisfied.

To see why market competition presupposes a legal framework, simply note what happens when markets are not embedded in a functioning legal system: if firms compete through violent conflict rather than on price and quality, then the most successful firms will likely not be those most effective at serving customers, but those most effective at military combat; if customers are forcibly prevented from patronizing competing firms, or if firms forcibly prevent new entrants into the market, then firms have little incentive to reduce prices or innovate; and in general, if property rights are not secure, then there is little incentive to invest or produce. Clearly, the standard efficiency properties of markets only hold if there is a functioning legal system that ensures enforcement of property rights and contracts.

It follows that *before* polycentrists can employ price theory and market competition to show how competition between protection agencies would have beneficial results, they must *first* show that a functioning legal system is in place.[11] Hence, absent some argument showing that a legal framework is in place, it is illegitimately circular to appeal to the advantages of competition over monopoly or to the constitutional function of market competition as arguments for legal polycentrism. Price theory and market competition cannot be employed in legal polycentrist theory until it is first shown that a legal system is in place.[12] Hence, as Holcombe (2004) notes, the legal system is a special case in economic theory. In particular, results from price theory do not directly apply to the question of organizing the legal system, since price theory presupposes the existence of a functioning legal system.

---

11 It is true that exchange of possessions can work without robust contract law. But it is a different story for exchange of services, and in particular, protection and dispute resolution services.

12 It seems plausible that the standard critique of government monopolies—information and incentive problems—still holds for legal services; see Caplan and Stringham 2008. The problem is that the standard advantages of competition over monopoly do not apply straightforwardly in the legal sector.

III – Responses

The key question then becomes: can legal polycentrists show that the legal-institutional prerequisites of markets are satisfied? That is, can they show that a legal framework is in place, and is this framework robust enough to satisfy the requirements of price theory?

So far the only substantive response to the circularity problem is by Long (2008, 140-41): "It is sometimes objected that legal services cannot be supplied on the market because a functioning market *presupposes* a functioning legal order. Now it is true that a functioning market requires a functioning legal order; but it is equally true that a functioning legal order requires a functioning market … [A] state cannot exist unless there is a functioning economy of some sort. […] In any case, a functioning market and a functioning legal order arise *together*; it's not as though one shows up on the scene first and then paves the way for the other."

Assume for the sake of argument that Long is correct that markets and law arise together.[13] The question remains: what specifically is the legal framework that provides the basis for markets? If legal polycentrism assumes the existence of a functioning market, it must show that the legal requirements of markets are satisfied. It is true, but irrelevant, that historically, legal institutions and markets have gradually developed together.[14] To solve the circularity problem, one must show concretely *how* markets and polycentric law develop together up to the extent assumed by legal polycentrism.[15]

IV – Informal institutions

At this point, polycentrists might point to informal institutions to make up the legal framework that markets require. Mechanisms such as norms, trust, and reputation can secure

13 Long is definitely correct that legal institutions and markets *develop* together; that is, they grow and mature together. But they do not necessarily come into existence together. Friedman (1994b) gives a counterexample of law arising prior to markets: self-enforcing property rights and contracts can arise in the state of nature, based on focal points. Hence legal institutions do not always presuppose a market. A modern state could not arise without a functioning market, of course, because *no* society can advance beyond primitive conditions without the wealth produced by an extended division of labor.

14 Historically, *governmental* legal institutions and markets have developed together, starting in primitive societies and growing into advanced market economies. This does not prove that the same would hold for polycentric legal institutions. As I discuss in the next section, scalability is an important problem for legal polycentrism.

15 We know how markets and governmental law develop together. In Olson's stationary bandit theory, informal legal institutions provide the basis for some economic activity by peasants, which is plundered by roving bandits. Once the bandits become stationary, they provide formal legal institutions and other public goods to maximize their tax revenues, and these formal institutions allow for the development of advanced market economies.

cooperation in the absence of a third-party enforcer.[16] These informal legal institutions can ensure that contracts and property rights are enforced, and provide the legal foundation required by markets.

However, informal institutions are limited in their ability to scale up.[17] According to the standard theory, informal mechanisms only work well in small groups of homogeneous agents with low discount rates.[18] For example, reputational mechanisms might break down in large anonymous groups, since communicating information about cheaters becomes prohibitively costly. Or, as Leeson (2007a) argues, they might fail if there are strength disparities between trading partners, in which case the stronger agent can plunder with impunity instead of trade.

But to capture the benefits of economies of scale and the division of labor, legal polycentrism needs to work in large, heterogeneous populations. To do so, it needs a legal structure that is scalable. Hence if informal institutions are effective only on a small scale, it would seem that they are incapable of providing the legal framework required for large-scale markets.

It is true that there are counterexamples to the standard story. Economists studying anarchism analytically have found examples which show that cooperation can be self-enforcing in cases of large groups, heterogeneous agents, or high discount rates.[19] But for the most part, it seems to me that the standard theory is correct. Merely proving the *possibility* of cooperation without third-party enforcement is not enough to show that legal polycentrism is a robust system. Rather, it must be shown that cooperation is *likely* to emerge and persist, especially under deviations from ideal conditions. If future research can show that informal institutions are more scalable and robust than the standard theory says, then norms and reputation may be a potential solution to the circularity problem. But until then, the current evidence is not enough to overturn the standard theory.

Informal institutions might still play a role in solving the circularity problem. Consider a bootstrapping process: informal legal institutions provide the basis for formal polycentric

16 See Bernstein 1992, Clay 1997, Ellickson 1991, Greif 1993, Landa 1994, and Powell and Stringham 2009.
17 By scalability I mean the ability of an institution to function effectively as population size increases.
18 See Frye 2000, p.28-32; Axelrod 2006.
19 See Leeson 2007b, 2008, 2009; Skarbek 2011; and Stringham, 2003.

institutions (protection agencies, arbitration networks, etc.) on a small scale; then, since formal institutions are scalable, the latter can scale up to work in large populations.[20] This seems to be the most promising response to the circularity problem. However, it is not clear specifically how such a bootstrapping process would work; further analysis is needed to evaluate this possibility.[21]

V – Implications

If informal institutions fail to establish a scalable legal framework, legal polycentrists cannot claim to have solved the circularity problem. It has not been shown that the legal requirements of large-scale markets are satisfied under legal polycentrism. This leaves two unsolved problems for the theory of legal polycentrism[22]: First, if contracts between individuals and protection agencies are not enforced, the whole system fails to get off the ground. According to legal polycentrism, these contracts are the basis for protection of property rights and adjudication of disputes; yet if they are not enforced, there can be no functioning legal system.

Second, if the general legal requirements of large-scale markets are not satisfied, then it is illegitimate to employ price theory as an argument for legal polycentrism. Since price theory assumes that property rights and contracts are enforced, polycentrists are not warranted in drawing on the benefits of market competition unless they first show that these conditions are satisfied. Taken together, these two problems imply that polycentrists have not succeeded in proving the case for a polycentric legal system.

Furthermore, by focusing our attention on the legal requirements of markets, the circularity problem shows that the prevailing interpretation of legal polycentrism is the wrong way to think about the issue. Recall from the introduction the distinction between the equilibrium and the transition methods: the former assumes a polycentric system exists and attempts to prove stability, whereas the latter starts in the state of nature and shows how a polycentric system could emerge. Up to now, practically all theorists writing on legal polycentrism have followed the equilibrium method, which they have conceptualized as privatizing the legal system, or turning

20 Given a pre-existing legal framework, markets can produce law. For example, in today's world, private arbitration companies produce law in the form of dispute adjudication; see Benson 2000 and Caplan and Stringham 2008.

21 Scaling of informal institutions might also be accomplished through a nested, federal structure (Ostrom 1990, 101), or through a non-hierarchical, network structure. See Dourado 2012 for an example of the latter in the context of Internet security.

22 In addition to the problems raised by Cowen 1992 and Cowen and Sutter 2005.

the legal system over to the market.

But this way of conceptualizing the equilibrium method is confused. Before something can be turned over to the market, it must first be shown that the market exists, which in turn requires showing that there exists a legal framework to provide the foundation for that market. Hence the fundamental question is *not* whether the legal system should be produced by government or markets—whatever that would mean. Instead, it is whether a functioning legal system can be established without forming a state, that is, without creating a monopoly of violence.

Consider: when government privatizes a shoe monopoly, it allows[23] other shoe producers to enter the market and compete. Note that we implicitly assume there is an exogenous legal framework in place, guaranteeing enforcement of property rights and contracts. What could it mean to privatize the legal system? By analogy, it would seem to imply allowing[24] private police and courts to compete with the system of governmental police and courts. But note that in this case, the legal framework is *endogenous*; we do not assume enforcement of property rights and contracts, but rather it must be derived as an equilibrium outcome.

In the shoe monopoly case, we assume a pre-existing, exogenous legal framework to provide the basis for markets. Hence the idea of market competition is well-defined. As the requirements of price theory are satisfied, we can use its results to evaluate whether competitive production of shoes is preferable to a government monopoly. But in the case of the legal system, we treat the legal framework as endogenous. The question here is whether competition between protection agencies will produce a functioning legal system that can satisfy the requirements of markets. This is logically prior to *using* price theory for any sort of comparative analysis. Hence, talk of "privatizing the legal system" is merely metaphorical. The real issue is whether the legal system can be organized on a polycentric basis.

23 By "allow" I mean that the government does not use its power of legal coercion to prohibit new entrants into the market.

24 What does "allow" mean in this case? Having competing police agencies means that there is no one agency with a monopoly of legal coercion—a government. So "allow" here must mean something different than in the sense above. One possible interpretation is that other protection agencies do not use their power of legal coercion to prohibit new entrants into the market. But this is problematic, since sometimes agencies *should* prohibit new entrants; for example, criminal agencies should be forcibly put out of business. So for the legal market, the Austrian free-entry criterion for competitiveness breaks down. Hence, if we are to exclude normative considerations (for example, saying that the market is competitive if firms follow the nonaggression principle), we must turn to a market-share theory of monopoly: the legal market is competitive if there are sufficiently many protection agencies.

Instead of "privatization," I suggest a better way to think about legal polycentrism is the organization of the legal system. Rather than viewing the issue as government vs. markets, or monopoly vs. competition, it should be understood as polycentric vs. monocentric organizations of the legal system. In fact, I would suggest abandoning the "privatization" terminology altogether, since by focusing attention away from the legal requirements of markets, it makes people more likely to encounter the circularity problem, and it obscures the true problem: constructing a functioning legal system.[25] Of course, this does not mean that legal polycentrism is impossible; it just means that "privatization" is the wrong way to approach the problem.

There are two other problems for the privatization conception of the equilibrium method. First, since privatization is the wrong way to think about the issue, optimism about the benefits of markets offers little, if any, support for legal polycentrism.[26] It is not clear how price theoretic results about the robustness and efficiency of markets can inform the question of how to organize the legal system, given that markets presuppose a legal system. Legal polycentrism is more about state of nature dynamics than price theory. So it does not make sense to argue that "markets are great, therefore legal polycentrism." Again, to assume the existence of functioning large-scale markets, it must be shown that the legal requirements of such markets are satisfied.

Second, much discussion about public goods is similarly confused. Asking whether the legal system is a private or public good, and hence amenable to market production or not, is to fundamentally misconstrue the problem. For the equilibrium approach, the key issue is the prior question of whether the legal system can be organized polycentrically instead of monocentrically, so that the legal framework required by large-scale markets can be established in the first place. Even if it turned out that a particular legal service is a private good, the basic question is whether there would exist markets on which it could be produced.[27] In principle, the equilibrium method is valid; to show that legal polycentrism is a viable system, it is necessary to show that it is a stable equilibrium. But these problems would have to be resolved to employ the equilibrium method correctly.

---

25 This is also an argument (though perhaps not a decisive one) for jettisoning the labels "market anarchism" and "anarcho-capitalism" in favor of "legal polycentrism," since the first two improperly allude to price theory, whereas the latter correctly focuses on the key issue: the organization of the legal system.

26 Skepticism about government, however, does offer support for legal polycentrism.

27 Whether or not legal institutions have public goods aspects, however, is still a relevant issue. For example, legal systems that use coercion to solve free-rider problems might be more successful than non-coercive ones.

It is important to note that these problems do not necessarily apply to the transition method. In particular, they need not apply to the bootstrapping story mentioned above, where informal institutions provide the legal basis for formal polycentric institutions, which can then scale up to work in large populations. Since informal institutions provide the legal foundation for the existence of small-scale markets, we are justified in drawing on some results from price theory, and questions about public goods become relevant.[28] For this approach to succeed, however, it must be shown that the legal requirements of markets are satisfied at each step in the argument. This means that to draw on medium-scale markets, there have to be a medium-scale legal system, and so forth. In comparison, since the equilibrium method starts by assuming the existence of functioning large-scale markets, it must be shown that there exists a large-scale legal system.

VI – A New Approach

Given the circularity problems facing the standard literature on legal polycentrism, it might be fruitful to look at different methods for studying the issue. One promising example is investigating the organization of violence in society. As North, Wallis, and Weingast (2009) note, the problem of containing and limiting violence is at the heart of social order.

This approach is already being developed by researchers studying the economics of conflict.[29] In this literature, the standard story is that unorganized violence is undesirable, whereas organized violence can be socially beneficial.[30] Under unorganized violence, where all individuals use violence to defend property rights, the security of property claims depends on each individual's ability to wield violence to protect their property. Each individual must invest resources away from production and towards protection, which undermines the division of labor. Adding in the effects of the uncertainty of property claims and the possibility of violent conflict, unorganized violence appears to be wholly unsuitable for promoting economic prosperity.

In contrast, organized violence can be socially productive if violence is used to protect property rights, and not for predation. Think of Olson's stationary bandit, who has an incentive to

28 Price theory assumes a perfect legal system. If informal institutions only establish an imperfect legal framework, then only the weaker results from price theory can be drawn upon.

29 See Bates et. al., 2002; Hirshleifer, 1995; Humphrey, 2010; and Konrad and Skaperdas, 2010.

30 In this literature, "violence" is defined neutrally as the imposition of physical costs on others, which can be initiatory or defensive. To show that initiatory violence would be minimized or eliminated under legal polycentrism, one should derive this as an equilibrium outcome of the model, not assume it as a starting point.

provide security and enforce property rights in order to maximize his tax revenues. By having a specialist in violence, all other individuals can specialize in production, allowing an extended division of labor and thereby prosperity.[31]

It seems to me that legal polycentrists can and should engage this literature on the question of which form of organized violence is best. As government is a monopoly of violence, we can view legal polycentrism as a polycentric organization of violence. If legal polycentrism is superior to the state, then it must be shown that a polycentric organization of violence is superior to a monocentric one.

31 Note that this approach does not renounce economic analysis. Although it does not use price theory, it is still based on rational choice theory.

References

Axelrod, Robert. 2006. *The Evolution of Cooperation: Revised Edition*. Basic Books.

Barnett, Randy. 1998. *The Structure of Liberty: Justice and the Rule of Law.* Oxford University Press.

Bates, Robert, Avner Greif, and Smita Singh. 2002. "Organizing Violence." *Journal of Conflict Resolution*, 46(5): 599-628.

Benson, Bruce. 2000. "Arbitration," pp. 159-193, in Bouckaert, Boudewijn and Gerrit De Geest (eds.), *Encyclopedia of Law and Economics Volume V. The Economics of Crime and Litigation.* Cheltenham, Edward Elgar.

Bernstein, Lisa. 1992. "Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry." *Journal of Legal Studies,* 21(1): 115–57.

Buchanan, James M. 2011. "The Limits of Market Efficiency." *Rationality, Markets, and Morals*, 2: 1-7.

Caplan, Bryan and Edward Stringham. 2003. "Networks, Law, and the Paradox of Cooperation." *Review of Austrian Economics*, 16(4): 309-326.

———. 2008. "Privatizing the Adjudication of Disputes." *Theoretical Inquiries in Law*, 9(2): 503-528.

Clay, Karen. 1997. "Trade without Law: Private Order Institutions in Mexican California." *Journal of Law, Economics and Organization*, 13(1), 202-231.

Cowen, Tyler. 1992. "Law as a Public Good: The Economics of Anarchy." *Economics and Philosophy,* 8(2): 249-267.

———. 1994. "Rejoinder to David Friedman on the Economics of Anarchy." *Economics and Philosophy*, 10(2): 329–332.

Cowen, Tyler and Daniel Sutter. 1999. "The Costs of Cooperation." *Review of Austrian Economics*, 12(2): 161–173.

———. 2005. "Conflict, Cooperation and Competition in Anarchy." *Review of Austrian Economics*, 18(1), 109–115.

Dourado, Eli. 2012. "Internet Security without Law: How Service Providers Create Order Online." Working Paper No. 12-19, Mercatus Center at George Mason University.

http://mercatus.org/sites/default/files/ISP_Dourado_WP1219.pdf

Ellickson, Robert. 1991. *Order without Law: How Neighbors Settle Disputes*. Cambridge, Mass.: Harvard University Press.

Friedman, David D. 1994a. "Law as a Private Good: A Response to Tyler Cowen on the Economics of Anarchy." *Economics and Philosophy*, 10(2): 319-327.

———. 1994b. "A Positive Account of Property Rights." *Social Philosophy and Policy*, 11(2): 1-16.

———. 1996. "Anarchy and Efficient Law," pp. 235-253, in Sanders, John and Jan Narveson (eds.), *For and Against the State*. Rowman and Littlefield Publishers.

Frye, Timothy M. 2000. *Brokers and Bureaucrats: Building Market Institutions in Russia*. Ann Arbor: University of Michigan Press.

Greif, Avner. 1993. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition." *American Economic Review*, 83(3), 525-548.

Hirshleifer, Jack. 1995. "Anarchy and its Breakdown." *Journal of Political Economy*, 103(1): 26-52.

Holcombe, Randall. 2004. "Government: Unnecessary but Inevitable." *Independent Review*, (3): 325-342.

Humphrey, Shawn. 2010. "Political Economy of Violence," pp.797-806, in Rhona Free (ed.), *21st Century Economics: A Reference Handbook*. Sage Publications.

Kirzner, Israel M. 2000. "The Limits of the Market: Real and Imagined," pp. 77–87, in *The Driving Force of the Market*. New York, NY: Routledge.

Konrad, Kai and Stergios Skaperdas. 2012. "The Market for Protection and the Origin of the State." *Economic Theory*, 50(2): 417-443.

Landa, Janet. 1994. *Trust, Ethnicity, and Identity*. University of Michigan Press: Ann Arbor.

Lee, John Roger. 2008. "Libertarianism, Limited Government, and Anarchy," pp. 15-20, in Long, Roderick and Tibor Machan (eds.), *Anarchism/Minarchism: Is a Government Part of a Free Country?* Ashgate.

Leeson, Peter. 2007a. "Anarchy, Monopoly, and Predation." *Journal of Institutional and Theoretical Economics*, 163(3): 467-482.

———. 2007b. "Trading with Bandits." *Journal of Law and Economics*. 50(2): 303–21.

———. 2008. “Social Distance and Self-Enforcing Exchange.” *Journal of Legal Studies*, 37(1): 161-188.

———. 2009. "The Laws of Lawlessness." *Journal of Legal Studies,* 38(2): 471-503.

Long, Roderick. 2008. “Market Anarchism as Constitutionalism,” pp. 133-154, in Long, Roderick and Tibor Machan (eds.), *Anarchism/Minarchism: Is a Government Part of a Free Country?* Ashgate.

North, Douglass, John Wallis and Barry Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge University Press.

Nozick, Robert. 1974. *Anarchy, State, and Utopia*. New York: Basic Books.

Morris, Christopher. 1998. *An Essay on the Modern State*. Cambridge University Press.

Olson, Mancur. 1993. “Democracy, Dictatorship, and Development.” *American Political Science Review*, 87(3): 567-576.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.

Powell, Stringham. 2009. “Public Choice and the Economic Analysis of Anarchy: A Survey.” *Public Choice*, 140(3-4): 503-538.

Skarbek, David. 2011. “Governance and Prison Gangs.” *American Political Science Review*, 105(4): 702-716.

Stringham, Edward. 2003. “The Extralegal Development of Securities Trading in Seventeenth Century Amsterdam.” *Quarterly Review of Economics and Finance*, 43(2): 321-344.

Telser, Lester G. 1980. A Theory of Self-Enforcing Agreements. *Journal of Business*, 53, 27–44.