Pirates, Prisoners, and Preliterates: Anarchic Context and the Private Enforcement of Law*

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Abstract

This paper investigates institutions that develop to strengthen or expand the discipline of continuous dealings as a mechanism for privately enforcing law. I consider three such institutions in three different anarchic contexts: that of Caribbean pirates; that of drug-dealing gangs and prison inmates; and that of preliterate tribesmen. These cases highlight several ways in which different anarchic contexts give rise to different private law enforcement institutions. The varieties of private law enforcement institutions that emerge in different anarchic contexts reflect the particular problem situations that persons who rely on those institutions confront in their attempts to protect property rights without government.

Keywords: Anarchy; self-governance; discipline of continuous dealings; pirates; prison gangs; preliterate societies

JEL: K40, K42, K49, Z13

* I thank the Editor and two anonymous reviewers for helpful comments and suggestions.

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1 Introduction

In 1651 Thomas Hobbes (1651: chap. 13, para. 9) famously characterized life in anarchy as "solitary, poor, nasty, brutish, and short." The logic that underlies Hobbes' characterization is familiar. Without government there's no law to prevent the strong from plundering the weak, the unscrupulous from bamboozling the unwitting, or the dishonest from defrauding the honest. Thus in anarchy property rights are unprotected.

Hobbes' reasoning about anarchy is grounded in a critical assumption: without govern*ment* there can be no govern*ance*—no law protecting property rights and supporting social order.[1] A growing body of research suggests Hobbes' assumption is wrong. This research considers the possibility of self-governance: privately created law protecting property rights and supporting social order. The literature on self-governance investigates how persons who find themselves without recourse to government to oversee their interactions, or who choose to eschew government-created law, may develop their own social rules for that purpose instead. Far

[1] I define anarchy as the absence of government (or state) and call the institutions that emerge under anarchy self-governing (or private). Defining government satisfactorily is much more difficult (Leeson 2013a). Weber's (1919) classic characterization of government—as a territorial monopoly on the legitimate use of coercion—while widely used, is problematic. Whether an agency of coercion could be said to have a "monopoly" depends on how one defines the territory under consideration, merely pushing the definitional problem back a level. Further, Weber's definition encompasses governance arrangements that could be equally well, and perhaps even better, described as self-governing, such as an agency with a territorial monopoly on coercion created through the unanimous, voluntary agreement of the persons it governs, which we might call a club. If we modify Weber's definition of government to include only those agencies that govern some persons who have not consented to their governance, a new definitional ambiguity emerges: How many non-consenting persons—persons who don't consider the agency legitimate—are required to render a territorial monopoly on coercion "illegitimate" and thus not a government? Attempting to use exit costs to define government is equally problematic. It's costly to exit any governance arrangement unless there are an infinite number of such arrangements in a territory (which there never are). And there's no objective "cutoff cost"—no exit cost above which all must agree we that we definitively have government and below which all must agree that we definitively have anarchy—to appeal to for definition. Despite our inability to define government in a way that, if applied consistently, would not sometimes run counter to our intuitions about whether we have anarchy or government in a particular case, we nonetheless can, and do, distinguish anarchy/government in practice. People tend to agree about when a set of social relations seems better described as self-governed versus governed by government. For example, the cases this paper considers, which I describe as anarchic, have also been described that way by others. It of course remains possible for a reader to disagree with this description. But I expect most will not. On the governance spectrum along which we might place various systems of social organization (given our inability to distinguish them sharply), the cases this paper considers lie, I hope most will concur, closer to anarchy than to government.

from finding such rules' absence, this literature documents the private emergence of law in a multitude of anarchic contexts, including medieval Iceland and Ireland, early modern Amsterdam, contemporary Somalia, the "wild" American West, the cyber-sphere, World War II prison camps, modern-day Shasta County, California, and the medieval and modern international arena, to name only a few (see, for instance, Friedman 1979; Peden 1977; Stringham 2003; Coyne 2006; Leeson 2007a; Powell, Ford, and Nowrasteh 2008; Anderson and Hill 1979; Benson 1989, 1990, 2005; Coyne and Leeson 2005; Radford 1945; Ellickson 1991; and Skarbek 2010, 2011, 2012).[2] In these and many other anarchic environments, privately created laws against theft, violence, and a host of other socially destructive activities occupy the place that government-created law occupies in the world Hobbes advocated.

The prevalence of privately created law in this diversity of contexts raises the question of how such law is enforced. Chief among such enforcement mechanisms is the "discipline of continuous dealings" (see, for instance, Stringham 2002; Bernstein 1992; Ellickson 1991; Greif 1989; Milgrom, North, and Weingast 1990; and Clay 1997). The logic of the discipline of continuous dealings is simple. If you behave in a proscribed manner in your interaction with me today, I won't interact with you tomorrow and may tell others not to interact with you either. Provided that you value the stream of benefits flowing from future interactions with me and those who follow me more than payoff of behaving in a proscribed manner in your interaction with me today, this threat can induce you to comply with behavioral proscriptions.[3] It can make interpersonal agreements about how to behave—what in the broadest sense we might call law—self-enforcing.[4]

[2] For other examples of such contexts, see the research surveyed in Powell and Stringham (2009).

[3] See Leeson (2008) for a discussion of the conditions required for the discipline of continuous dealings to be effective and the conditions under which it breaks down.

[4] It's in this broadest sense that this paper uses the term "law."

This paper investigates institutions that develop to strengthen or expand the discipline of continuous dealings as a mechanism for enforcing law. The discipline of continuous dealings helps enforce privately created law in an impressive array of stateless legal environments. However, the way in which it does so often goes beyond the simple, unaided boycott mechanism described above. That mechanism is augmented by and works in tandem with supplementary self-governing institutions, which render the discipline of continuous dealings a more effective enforcer of private law. I analyze the ways in which individuals who populate different anarchic environments develop and adapt variants of this basic self-governing mechanism to improve private law enforcement given the particular contexts they find themselves in. I consider three such variants in three different anarchic contexts: that of Caribbean pirates; that of drug-dealing gangs and prison inmates; and that of preliterate tribesmen.[5]

Each of these anarchic contexts has several features in common with the others. They're all anarchic. And persons in each of them require the enforcement of laws that protect property rights.

However, each of these contexts also has several features particular to it that distinguish it from the others. Besides the different types of persons these contexts involve, those persons face different kinds of threats to their property rights or rather seek to enforce laws protecting different kinds of property rights. Further, persons in each of these contexts face different institutional backgrounds they may draw on to facilitate the private enforcement of those rights.

The cases I consider highlight several ways in which different anarchic contexts give rise to different private law enforcement institutions that support and improve the discipline of continuous dealings' ability to enforce privately created law and thus to promote social order.

[5] Anderson and Hill (1979), Friedman (1979), Leeson (2007b, 2009a, 2012a, 2013b), and Leeson and Coyne (2012) provide further examples and discussion of self-governing institutions that go beyond the discipline of continuous dealings alone.

The range of such institutions that emerge in unique contexts I discuss reflect the particular problem situations that persons who rely on those institutions confront in their attempts to protect property rights without government. This range suggests that institutions of private law enforcement have some claim to sophistication. Those institutions are flexible, adaptive, and tend to develop in ways that are specially suited to the needs of the individuals who use them.

2 Pirates

Early eighteenth-century pirates plied the waterways of the Caribbean, the Gulf of Mexico, the Atlantic Coast, and the Red Sea. I discuss these pirates and their political-economic organization at length elsewhere (see, for instance, Leeson 2007c, 2009b, 2009c, 2010).[6] My analysis below draws on this work.

Caribbean pirates operated in independent crews that averaged 80 members. With this many crewmembers, pirates had plenty of men to operate the ship and its guns. They also significantly outnumbered most merchant crews they would encounter, making the latter—pirates' targets—easy prey.

To plunder successfully, pirate crewmembers needed to coordinate their activities. Like legitimate naval vessels, pirate vessels required teamwork to function. The most critical activities requiring crewmember coordination were those involved with chasing and engaging prey.

To facilitate such coordination, pirate crews had captains. Pirate captains directed crewmembers and wielded unquestioned command in times of battle. All other times a second pirate officer, called the quartermaster, led a pirate crew. The quartermaster facilitated crewmember coordination on a day-to-day basis. He was in charge distributing victuals and

[6] See also, for instance, Johnson (1726-1728), Pringle (1953), Rediker (1987), and Cordingly (2006).

booty after seizing a prize, wielded the authority to discipline unruly crewmembers, and arbitrated inter-crewmember disagreements within his crew.

Pirate crews couldn't have done without these officers. The functions they performed were indispensable for pirating.[7] However, the creation of such officers aboard pirate ships created the possibility that officers would abuse their authorities, using them in ways that served their own aims at the expense of the broader crew's. Thus while pirate crewmembers granted their captains and quartermasters special powers, they did so on the understanding that officers were only to use those powers in the service of the crew's collective interests rather than in officers' private ones.

The floating societies that seadogs worked, and lived, in much of the time provided pirates' anarchic context. This context was anarchic because pirates were criminals. They couldn't rely on government to protect them from stealing from or murdering each other or to enforce other behavioral agreements—laws—they made with one another. Captains (in "wartime") and quartermasters (in "peacetime") performed this function for pirates instead. But what of pirates' agreements with captains and quartermasters—their laws limiting how officers could use the special powers those officers wielded? Who, or what, could enforce them?

The discipline of continuous dealings in its simplest form was of limited use here. Captains and quartermasters who earned reputations as corrupt, abusive types would have a difficult time recruiting crewmembers for future expeditions. But this was of little help to pirates once they were at sea. Pirate expeditions could last many months. If a pirate had the misfortune of falling in with a crew led by officers who decided to wield their authority corruptly, it would

[7] Indeed, they were indispensable for any kind of sustained maritime activity. On merchantmen and Royal Navy ships these functions had to be performed too. Though, in contrast to pirates, on these vessels, those functions were concentrated in captains' hands. For a discussion of the economic reason for this, see Leeson (2007c, 2009c).

be a long, dreary, and potentially deadly time before they might have the opportunity to exit this circumstance.

Pirates required an institution that could augment the discipline of continuous dealings as a mechanism for enforcing the private law that governed relations between officers and ordinary crewmembers. The institution they devised for this purpose was constitutional democracy.

Pirate crews democratically elected their captains and quartermasters. A popular vote of approval on these officers' worth and behavior could be and was held at any time ordinary crewmembers saw fit. A captain or quartermaster who the crew was unhappy with because he was using his authority in ways that crewmembers believed contradicted their agreement about how he should use that authority could be and was popularly deposed and a new person elected in his place. In this way pirates relied on the logic of democratic checks and balances to privately enforce law governing authorities' use of power. Remarkably, this is the same logic James Madison described for enforcing restrictions on government officials' authority in the Federalist Papers. But pirates put it to use more than half a century before Madison put pen to paper.

Democracy was an important means of privately enforcing law circumscribing pirate officials' power. But democracy's enforcement power was itself circumscribed. If crewmembers couldn't agree on what constituted an official's abuse of authority, they couldn't coordinate their votes to elect law-abiding officials or to depose law-breaking ones. This inability would undermine democratic checks and balances' ability to check and balance, and thus to enforce the law. To overcome this difficulty pirates needed an explicit articulation of what precisely that law was.

Enter the constitutional element of pirates' constitutional democracy. To render the range and limits of captains' and quartermasters' authorities and obligations more explicit, pirates

created constitutions. Pirate constitutions delineated items such as the crew's collective-choice mechanism, expressly indicating that crewmembers had rights to vote on particular matters. This prevented captains or quartermasters from trying to exercise autocratic decision making where crewmembers sought to reserve decision-making rights for themselves, such as in the selection of officers. Because of the bright-line rule enshrined in a crew's constitution, if its officers tried to usurp decision-making power reserved for the crew, their actions would be viewed by crewmembers as a violation of the law meriting the punishment of popular removal. Similarly, pirate constitutions delineated the rules that quartermasters were to enforce. This prevented quartermasters from using their powers of discipline in ways that crewmembers didn't approve. Pirate constitutions also delineated rules of booty distribution, making it clear what captain's compensation was limited, what the quartermaster's was limited to, and what ordinary crewmembers were entitled to, creating bright-line rules about when an officer was embezzling from the crew, and so on.

Pirates wrote all of this down in constitutional documents they called articles. Consider the following articles from the *Royal Fortune*, a pirate ship captained by Bartholomew Roberts, the Golden Age of Piracy's most successful pirate captain (Johnson 1726-1728: 211-212):

> I. *Every Man has a Vote in the Affairs of Moment; has equal Title to the fresh Provisions, or strong Liquors, at any Time seized, and may use them at Pleasure, unless a Scarcity make it necessary, for the Good of all, to vote a Retrenchment.*
>
> II. *Every Man to be called fairly in Turn, by List, on board of Prizes, because, (over and above their proper Share) they were on these Occasions allowed a Shift of Cloaths: But if they defrauded the Company to the Value of a Dollar, in Plate, Jewels, or Money,*

Marooning was their Punishment. If the Robbery was only betwixt one another, they contented themselves with slitting the Ears and Nose of him that was Guilty, and set him on Shore, not in an uninhabited Place, but somewhere, where he was sure to encounter Hardships.

III. *No person to Game at Cards or Dice for Money.*

IV. *The Lights and Candles to be put out at eight a-Clock at Night: If any of the Crew, after that Hour, still remained enclined for Drinking, they were to do it on the open Deck.*

V. *To keep their Piece, Pistols, and Cutlash clean, and fit for Service.*

VI. *No Boy or Woman to be allowed amongst them. If any Man were found seducing any of the latter Sex, and carry'd her to Sea, disguised, he was to suffer Death.*

VII. To *Desert the Ship, or their Quarters in Battle, was punished with Death or Marooning.*

VIII. *No striking one another on board, but every Man's Quarrels to be ended on Shore, at Sword and Pistol.*

IX. *No Man to talk of breaking up their Way of Living, till each shared a 1000 l. If in order to this, any Man should lose a Limb, or become a Cripple in their Service, he was to have 800 Dollars, out of the publick Stock, and for lesser Hurts, proportionately.*

X. *The Captain and Quarter-Master to receive two Shares of a Prize; the Master, Boatswain, and Gunner, one Share and a half, and other Officers one and a Quarter.*

XI. *The Musicians to have Rest on the Sabbath Day, but the other six Days and Nights, none without special Favour.*

Before joining a pirate crew, new members had to read (or have read to them) the crew's articles so that they were aware of the bounds of officers' authorities. Further, they had to sign (or "make their mark" on) the constitution in certification of this knowledge. This process ensured that all crewmembers had common knowledge about what constituted legitimate or illegitimate officer behavior and thus knew when an officer was breaking the rules. Common knowledge in turn improved democratic checks and balances' ability to privately enforce pirate law aimed at simultaneously empowering and constraining pirate officers.[8]

Pirates' institution of private law enforcement is quite fantastic, really, not to mention considerably more sophisticated than the traditional-boycott manifestation of the unagumented discipline of continuous dealings. However, the latter enforcement mechanism continued to play an important role here too. Pirates' constitutionally facilitated democratic law-enforcement mechanism can be seen as one that prescribed boycotting a pirate officer who abused his power. Thus the threat of being cut off from the ability to act as such an officer in the future disciplines—via popular vote—existing officers' behavior at the moment.

The discipline of continuous dealings by itself was insufficient to privately enforce the law in pirates' anarchic context. It had be appended, modified, and bolstered through the introduction of constitutional democracy to perform adequately in the context of pirates' particular problem situation: how to enforce the law against officers when immediate enforcement is needed because of the long time crews spent at sea. Thus we find the development of this supportive institution of private law enforcement—one that reflects a response to pirates' particular needs—among Caribbean seadogs.

[8] For a further discussion of how pirates' constitutionally created common knowledge about laws facilitated pirates' ability to cooperate, see Leeson and Skarbek (2010).

3 Prisoners

In the 1950s a new phenomenon appeared on the radar screen of the California state prison system: prison gangs. Today the largest, most influential, and most important such gang in the Los Angeles County correctional system is known as the Mexican Mafia. David Skarbek (2010, 2011, 2012) discusses the political-economic organization of this, and other, prison gangs elsewhere.[9] My analysis below draws on his work.

Internally the Mexican Mafia is organized along lines reminiscent of Caribbean pirates. Constitutional democracy in the Mexican Mafia case is much less explicit and thorough-going than it was among pirates. For example, it doesn't appear that prison-gang officers are formally democratically elected or deposed, as they were in the case of pirates. Still, the Mexican Mafia has a kind of criminal constitution—a set of written meta-rules that lays out the basic laws of the organization and, in doing so, establishes the bounds of legitimate behavior. This helps coordinate gang members on agitating for the replacement of officers who members view as behaving in unacceptable ways—i.e., breaking the gang's law.

Inside L.A. County correctional facilities the Mexican Mafia has a strong presence. Indeed, it has a virtual monopoly on the illicit use of coercion among Mexican prisoners. This permits the gang to provide basic governance services to its members. Most important among these services is property protection. The gang prevents rival inmates from stealing from or physically injuring or killing gang members.

While this anarchic context is fascinating in its own right, the one I want to focus on is connected but different. It involves the anarchic arena in which competing drug-dealing gangs on

[9] See also, Blatchford (2008), Mendoza (2005), Morales (2008), Morrill (2005), and Rafael (2007).

the streets of southern California operate, and their relationship to the Mexican Mafia prison gang.

The former gangs, called *Sureños* ("southerners"), are numerous. There are some 400 of them in Los Angeles County alone. *Sureños* confront a classic collective-action problem. Each gang must compete with neighboring ones for narcotics customers. If the competing gangs could agree to not compete and instead carve up their area into separate territories each monopolized by a single gang, all would benefit.

The potential benefits of such a cartelization arrangement for *Sureños* are two-fold. First, such an arrangement would prevent price wars between competing gangs, permitting everyone to realize higher prices. Second, and still more important, such an arrangement would prevent actual wars—violent ones—between competing gangs, permitting each gang to operate in cooperation, and peacefully side-by-side, with neighboring ones. Since *Sureños* operate in illicit markets, like pirates, they have no recourse to government. As a result, conflicts over territory can, and in some cases have, turned bloody. This is costly to gang members (not to mention customers and innocent bystanders)—both in terms of their lives and bottom lines.

The difficulty *Sureños* confront in sustaining an agreement that would provide these benefits is the same one all entities seeking to collude confront: the problem of enforcement. While drug-dealing gangs may promise to keep to certain territories, each has an incentive to break its promise and seek to surreptitiously capture its competitors' markets nonetheless. The resulting situation is a prisoners' dilemma. Collectively *Sureños* would be better off if they could agree to enforce a cartelization agreement that granted each of them designated territorial

monopolies.[10] But individual rationality confounds this "collectively rational" outcome. The result is continued competition and conflict.

In principle the discipline of continuous dealings alone can solve this enforcement problem. Indeed, in many other contexts of cartelization it's able to do just that. But in the particular anarchic context *Sureños* operate in, without augmentation—or rather, as I describe below, in this case, extension—the discipline of continuous dealings has difficulty enforcing "cartel law" privately. The reason for this is straightforward.

Among the conditions that must be satisfied for the discipline of continuous dealings to produce cooperation, interaction must be repeated with a sufficiently high probability. If the chance that parties will interact in the future is too low, the threat of being cut off from future interactions is no threat at all. Since potential future gains are worth little in this case, the resultant discipline that the discipline of continuous dealings threatens is weak. Law can't be enforced.

Drug-dealing gang members are unlikely to be in the drug-dealing trade for long. The trade is dangerous. One may be killed by a rival or a customer. Even if he's not, as I discuss further below, he's very likely to end up in prison, taking him, at least temporarily, "out of the game." These factors threaten to seriously reduce the probability that *Sureño* members will interact again in the future—or at least interact again in the future in a free state, outside of prison. As a result, the discipline of continuous dealings, if limited to dealings "on the outside," is a fragile foundation for enforcing *Sureños*' cartel arrangements. Confronted with this situation, *Sureños* use the Mexican Mafia prison gang as an institution for expanding the discipline of

[10] This assumes that profits don't rise so much through collusion that another gang enters the market and competes for the same territory.

continuous dealings to render it a more useful mechanism for privately enforcing laws that cartelize them.

The Mexican Mafia dominates the Los Angeles County prison system. Its members, many of whom are serving life or near-life sentences, are found throughout it. As a result, this prison gang is in an excellent position to privately enforce *Sureños*' cartels. This unique institutional feature of *Sureños*' anarchic context provides an unexpected, but highly effective, means of doing so.

As drug-dealing gangsters, many *Sureños* members wind up in prison at one point or another—often more than once. An important feature of incarceration is that it imprisons the incarcerated quite literally. There's no running away or getting out. This is the point of incarceration, of course. But drug-dealing gang members in southern California have figured out how to leverage this otherwise unfortunate situation to facilitate the private enforcement of cartel agreements.

Since *Sureños*' members are very likely to end up in the prison system at some point, they can rely on the Mexican Mafia to act as a third-party enforcer of their cartel agreements. The arrangement is simple. When a *Sureño* member goes to prison the Mexican Mafia protects him if he and his gang have respected the cartel agreement. If he or some other members of his gang have violated that agreement—if they've broken *Sureños* "law"—the Mexican Mafia not only leaves that person unprotected, but actively seeks to execute him, which it can readily do because of its monopoly on illicit coercion inside the prison among Mexican inmates. In return for providing this service, the Mexican Mafia "taxes" or levies a fee on drug-dealing gangs on the outside.

The imposition of such taxes poses a second problem of law enforcement in this anarchic arena. Since the Mexican Mafia members are (largely) incarcerated, how can the Mafia enforce *Sureños*' payment for the law-enforcement services it provides them? The key to enforcing this arrangement lays again in the fact that drug-dealing gang members often go to prison. Because of this, a member of a non-paying *Sureño* faces a high likelihood that he will eventually find himself confronted by the Mexican Mafia and, moreover, do so in an environment in which he has no chance of escape. This makes punishment all but certain. That specter permits the threat of violent retribution to privately enforce the Mexican Mafia's arrangement with *Sureños* to enforce *Sureños*' cartel agreements privately.

Note that this self-governing arrangement uses the very feature that renders the discipline of continuous dealings alone as a mechanism for enforcing cartel arrangements between *Sureños* problematic to render that mechanism, in augmented form, more effective: the high probability of gang members being "taken out of the game" by incarceration. It's precisely because of the high probability of incarceration that a drug-dealing gang expects to interact with the Mexican Mafia more than once—in the latter's capacity as legal enforcer among *Sureños* and in its capacity as tax collector from *Sureños*—that makes this system of private enforcement work. The Mexican Mafia institution makes use of, and reflects a response to, the particular problem situation that drug-dealing gang members and prisoners confront in their specific anarchic context.

4 Preliterates

In preliterate societies magic abounds. By "magic" I mean spells, rituals, and objects purported by their owners to have supernatural powers that, scientifically speaking, are nonsense. Mark

Suchman (1989) offers an explanation for magic's prevalence in preliterate societies. In my discussion below I sketch Suchman's reasoning in the context of a third anarchic context.[11] This discussion illuminates a third institution for improving the discipline of continuous dealings' ability to enforce the law privately: superstition.

I apply Suchman's reasoning to one society based on oral tradition in particular: the Azande.[12] Zande society was made famous by anthropologist E.E. Evans-Prithchard's (1937) study of them conducted in the late 1920s.[13] That study is considered a classic of the anthropological literature.

The Azande inhabit parts of the Democratic Republic of Congo, Sudan, and the Central African Republic. Today there are at least 1 million Azande. According to some estimates, there may be as many as 4 million of them.

At the time of Evans-Pritchard's study, the Azande believed they possessed magic flutes that kept witches away, magic spells that ensured better hunts, magic substances that improved agricultural productivity, and magic medicines that fought sickness. Magic was everywhere in Zande society. The reason for this may have been to enforce intellectual property (IP) rights privately.

Inventors have strong incentives to prevent others from copying their inventions. In developed societies, state-defined and enforced intellectual property rights perform this function. In preliterate societies of tribesmen, however, things are different. The Azande did have governments (native and, later, colonial).[14] But they lacked state-made and enforced intellectual

[11] I consider the same case of private law enforcement, but for a different purpose, in Leeson (2012b).

[12] "Azande" is the plural of "Zande." The latter is also used as an adjective. My use of these terms follows this convention.

[13] See also, Evans-Pritchard (1928, 1929, 1932, 1933, 1935, 1960a, 1960b, 1963a, 1963b, 1965, 1971).

[14] Though formal law's and legal institutions' reach remained limited, requiring private legal institutions even outside the realm of intellectual property. See Leeson (2011).

property law. Intellectual property thus remained in an anarchic arena. This arena supplied the anarchic context I want to consider.

The potential problem a Zande "inventor" confronted was straightforward. If he spent the time and effort required to develop, say, a more effective treatment for healing skin lesions, how could he be sure that somebody else wouldn't observe the combination of roots, tree bark, and so on that he invested his time in figuring out and either sell that information to other persons who treated the sick or use it for that purpose himself, eroding the inventor's returns from his innovation? In the absence of government for this purpose, how could a Zande inventor enforce property rights in his invention?

The basic boycott-manifestation of the discipline of continuous dealings is of limited usefulness here. Once a new idea is "out," it's freely available to all to exploit. An inventor could announce that he will boycott future interactions with anyone who reverse engineers his invention. But that threat will be difficult to enforce. Establishing that a person copied his invention rather than simultaneously discovered it is one problem. Pinpointing the person who's responsible for spreading the idea behind the invention is another.

Confronted with this problem, inventors in primitive societies, such the Azande's, may resort to magic to improve the private enforcement of IP rights. "Magic," as Suchman (1989: 1272) defines it, "encompasses any activity that society *construes* as being essential to the success of a technique but that has no *objective* function in the physical mechanics of the process itself." The way it can enforce intellectual property rights goes something like this.

Suppose a Zande inventor figures out that the bark of the dakpa tree is capable of healing skin lesions three days faster than the existing treatment for healing skin lesions. Unfortunately for the inventor, his neighbor has seen him collecting this bark and, in any event, can

immediately tell by looking at the resulting ointment it goes into that the new ingredient is dakpa tree bark. Because of this, it's easy for the inventor's neighbor, or anyone else for that matter, to reverse engineer the new treatment once they see it.

Our inventor faces a problem of property enforcement. So here's what he does. The next time someone has a skin lesion requiring attention, he invites his neighbor and several others from his community to observe the wonders of his new treatment. He applies the treatment to the patient. But when he does so he removes a stone from his belt and, while applying the ointment to the patient, rubs it over the patient's wound uttering some incantations. After he does this he announces that his new treatment for healing skin lesions requires the bark of the dakpa tree *and*, equally important, his magic stone/spell. He instructs the audience that the bark is essential but that in testing his new treatment he discovered that, without the magic stone/spell, the bark is not only useless, but actually harmful to the patient.

The ointment works and a day later it's already clear that the patient is healing faster. The persons who observed this spectacle are impressed. They want to obtain the inventor's new treatment for healing skin lesions. But they can't simply copy it because they have neither the magic stone nor spell required for it. Not to worry, the Zande inventor informs them. He would be happy to sell his magic stones (he has several of them) and spell to anyone who would like it. The observers line up eagerly to purchase his invention. Through magic, the inventor has managed to enforce a property right to his discovery. Now he can be sure that he will be rewarded for his innovative energies.

The idea at work here is very simple but also potentially very powerful. In the absence of IP protection, the inventor can't establish property rights in his new treatment. The key ingredient is too easy to reverse engineer and dakpa trees are abundant, allowing anyone to

collect it any copy his invention. But by pretending that his new treatment consists of the dakpa bark *and* the magic stone/spell, which only he possesses, he can create a property right in his invention. Unlike the bark ingredient, which is difficult to conceal and protect, the magic stone/spell is easy to conceal and protect. Thus the phony bundling of the bark and the magic stone/spell help enforce IP rights.

Crucially, this enforcement institution only works because the Zande inventor's community members believe in magic and thus repose faith in the inventors' magic stone/spell and his related magical claim that the bark is deadly without them. Absent that belief, community members would just experiment with the new treatment—first trying just the stone to see if that was the active ingredient, then trying just the bark to see if that was it—and soon enough they would possess the same treatment as the inventor without having to buy it from him. But as long as community members believe in the possibility of the inventor's magic, his invention is secure.[15]

While the discipline of continuous dealings alone is unable to enforce the inventor's property rights in his invention, it nevertheless plays in important role in supporting enforcement through magic indirectly. For magic to effectively protect intellectual property in the case described above, community members must not only believe in the possibility of the inventor's magic. They must also believe more generally in the inventor's credibility—i.e., that the bark will indeed be damaging without the inventor's stone/spell, as he tells them.

This credibility may in turn be based on the inventor's reputation as a healer, as someone with a history of treatment success because of his knowledge of, and ability to productively

[15] Of course, none of this is to say that most, or even many, of Zande treatments for illness were in fact efficacious. Evans-Pritchard (1937) concluded that few Zande "medicines" were likely to be efficacious in the scientific sense.

wield, magic. In this way a history of repeated, confidence-inspiring interactions supports magic's ability to improve the inventor's IP protection.

The discipline of continuous dealings may help to support magic as a mechanism of property protection in a second, closely related way: through closed organizations of individuals who alone are believed to be capable of using magic effectively, such as "associations" of witchdoctors. In some preliterate communities the occupation of magic healing is restricted to a small number of individuals who are alone thought capable of practicing, and thus are permitted to practice, certain kinds of magic. These "magic cartels," sustained by the discipline of continuous dealings among members, prevent others from potentially learning that magic is phony, which would undermine hocus pocus' power to improve IP protection. In this way the discipline of continuous dealings may support the persistence of organizations that can confer on their members the credibility pointed to above that allows magic to protect intellectual property rights.

Similar to the supplementary institutions for improving the discipline of continuous dealings as a mechanism for enforcing private law considered in the case of pirates and prisoners, in the case of preliterate societies too, the institution that emerges for this purpose reflects a response to the particular problem situation that individuals in societies with oral traditions confront in their specific anarchic context. The problem situation here is one of enforcing intellectual property rights where government doesn't do so and the discipline of continuous dealings by itself faces important obstacles as well. Magic forms part of an effective solution to this problem.

The effectiveness of this solution hinges critically on the particulars of the anarchic context. The Azande, and persons in societies with oral traditions more generally, are highly

superstitious and repose great faith in magic and related supernatural forces. Because of this, it's plausible to them that a magic stone or spell is doing the work an inventor claims for it. In a different anarchic context, for example one in literate societies where belief in magic is generally very weak, this particular institution of private law enforcement wouldn't work. Magic emerges as an institution for augmenting the discipline of continuous dealings in the preliterate, anarchic context precisely because in this context it's effective.

5 Concluding Remarks

This paper has pointed out something that's obvious by looking at the world, but is less-than-obvious to many people nonetheless. There are a variety of institutions of private law enforcement under anarchy. Moreover, that variety reflects the variety of particulars that specific anarchic contexts display.

Different anarchic contexts "come with" different specific problems of property protection and different institutional backgrounds. This makes different institutions of private law enforcement effective in each case. The cases this essay considered—that of eighteenth-century Caribbean pirates, contemporary Californian drug-dealing gangs and prisoners, and preliterate tribesmen—highlight the variety of institutions that emerged in three very different anarchic contexts to reinforce and expand the discipline of continuous dealings as a mechanism for enforcing private law. Most important, these cases suggest that the institutions of private law enforcement that emerge to augment simple boycott reflect the individualized needs of the persons who rely on them.

Pirates', prisoners', and preliterates' anarchic contexts are far from the ones in which alternative private institutions develop to support the discipline of continuous dealings. They're

simply the three I chose to consider. Future research would do well to turn its attention to identifying other such contexts and examining how the institutions that emerge to help enforce private law achieve their purposes differently in light of contextual differences. In addition to expanding our knowledge of self-governance more generally, such work would improve our understanding of the ways in which individuals under anarchy render social cooperation possible where the discipline of continuous dealings in its simplest, unaugmented form has difficulties doing so.

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