



## Was privateering plunder efficient?☆

Peter T. Leeson<sup>a,\*</sup>, Alex Nowrasteh<sup>b</sup>

<sup>a</sup> George Mason University, Department of Economics, MSN 3G4, Fairfax, VA 22030, United States

<sup>b</sup> London School of Economics, Economic History Department, Houghton St., London WC2A 2AE, United Kingdom

### ARTICLE INFO

#### Article history:

Received 17 July 2010

Received in revised form 22 October 2010

Accepted 8 February 2011

Available online 17 February 2011

#### JEL classification:

K00

K49

D23

D86

N40

#### Keywords:

Plunder

Coase theorem

Privateer

Anarchy

### ABSTRACT

This paper argues that when contracts between enemies are enforceable and transaction costs are low, plunderers and their victims benefit from trade that facilitates the former's ability to plunder the latter. Coasean "plunder contracts" transform part of plunder's social costs into private benefits for plunderers and their victims. A significant portion of the wealth that plunder would otherwise destroy is preserved instead. The result is more efficient plunder. To investigate our hypothesis we consider maritime marauding in the 18th and 19th centuries. Privateers developed a system of ransom and parole founded on Coasean plunder contracts with victim merchantmen.

© 2011 Elsevier B.V. All rights reserved.

## 1. Introduction

Every economist knows theft is socially inefficient. From society's perspective resources thieves use to transfer others' property to themselves, and resources others use to prevent thieves from stealing their property, are wasted. The social costs of violent theft – of plunder – are larger still. Plunder not only produces deadweight losses in the form of wasted resources. It quite literally destroys resources that are obliterated in violent contests between plunderers and their victims.<sup>1</sup>

However, no one has pointed out that plunderers have strong incentives to engage in activities that reduce plunder's social losses—to make plunder more (less) (in)efficient. This paper does that. We argue that while self-interest seeking leads plunderers to embark on violent theft in the first place, it also leads them to do so in ways that reduce their private cost. This in turn reduces plunder's social cost.

When contracts between enemies are enforceable and transaction costs are low, plunderers and their victims benefit from trade that facilitates the former's ability to plunder the latter. Coasean "plunder contracts" transform part of plunder's social costs – resources invested in violent appropriation and lost in violent conflict over ownership – into private benefits for

☆ We thank Pete Boettke, Tyler Cowen, Chris Coyne, the editor, and two anonymous reviewers for helpful suggestions on an earlier version of this paper and Judith-Jane Stark-Modlin for comments and assistance with accessing several hard-to-find sources. Leeson also thanks the Becker Center on Chicago Price Theory at the University of Chicago, where this research was conducted, and the Mercatus Center at George Mason University.

\* Corresponding author.

E-mail addresses: [PLEeson@GMU.edu](mailto:PLEeson@GMU.edu) (P.T. Leeson), [A.Nowrasteh@LSE.ac.uk](mailto:A.Nowrasteh@LSE.ac.uk) (A. Nowrasteh).

<sup>1</sup> For the classic discussion of the welfare costs of theft, and their similarity to the welfare costs of monopolies and rent-seeking, see [Tullock \(1967\)](#).

plunderers and their victims. A significant portion of the wealth that plunder would otherwise destroy is preserved instead. The result is more efficient plunder.

To investigate our hypothesis we consider maritime marauding in the 18th and 19th centuries. During war privately owned and operated vessels from enemy nations called privateers plundered one another's merchant shipping.<sup>2</sup> Traditional plunder whereby a privateer battled a merchantman and then hauled its prize back to port for condemnation in a "prize court" was costly to the privateer, the merchantman, and society. To reduce their costs of plunder, privateers developed a system of ransom and parole founded on Coasean plunder contracts between themselves and victim merchantmen.

Under these contracts privateers agreed to give merchantmen, their cargoes, and their crews their freedom for a price. The Coasean bargains that underlaid the ransom and parole system not only preserved merchant vessels, their cargoes, and merchant sailors' lives and freedom. They preserved privateering vessels, privateersmen's lives, and improved privateers' profit while reducing the social cost of maritime marauding. Not all privateers could capitalize on this system. But those that did facilitated more efficient plunder.

Our analysis highlights the Coase theorem's relevance and operation where it's expected least—between powerful plunderers and weak victims. Traditionally the Coase theorem's operability is confined to situations in which property rights are well defined and interactions are voluntary. Our analysis suggests that Coase's (1960) insight also applies to situations in which property rights are poorly defined and interactions are coercive.

Second, our findings suggest that even if the Hobbesian prediction of purely uncooperative relations in the absence of a formal overarching authority is correct, the conventional welfare implications of this predication may not be: a Hobbesian world of might makes right needn't lead to a nasty, brutish, and short existence. Compared to a world in which cooperation is the norm, one of predominantly uncooperative interaction fares worse. But plunderers' and victims' incentive to engage in activities that reduce plunder's social cost places an upper bound on how destructive even a world populated by individuals bent on violent theft can become.

A sizeable and growing literature demonstrates that the Hobbesian predication is overly pessimistic (see, for instance, Anderson and Hill, 1975, 2004; Benson, 1989, 1990; Dixit, 2004; Ellickson, 1991; Friedman, 1979; Landa, 1981, 1994; Leeson, 2007a, 2008; Leeson and Boettke, 2009; Powell and Stringham, 2009; Powell and Wilson, 2008; Stringham, 2003, 2007). Without government, individuals can and do secure a surprising degree of cooperation. However, in this paper we assume the "worst case" and consider the possibility of limiting social losses when agents are dedicated to plundering one another instead of engaging in socially productive behavior—when they're locked into a state of war with one another.

This paper is most closely connected to Becker's (1983, 1985) work on efficient rent-seeking. Becker demonstrates that while special interest group manipulation of policy may produce socially inefficient outcomes, the inefficiencies of such manipulation have been overstated because of a failure to recognize that special interest groups have incentives to seek rents in ways that reduce the deadweight costs of their activities. Our paper can be seen as an extension of this important insight to plunder. The ransom and parole system we describe is the institutional mechanism that achieves this.

Our analysis is also connected closely to Frey and Buhofer's (1988) important analysis of prisoner treatment and property rights. Their work highlights how when aggressors have property rights in their victims, they have strong incentives to treat their victims well. Our paper contributes to an understanding of why and how this outcome emerges in the context of the privateering ransom and parole institution.

Additionally our argument is related to Leeson's (2009a) analysis of the endogenously emergent "laws of lawlessness" that governed hostile relations between English and Scottish border reivers in the 16th century. His work shows how borderers developed laws that governed cross-border raiding to reduce the devastation wrought by their penchant for plunder. These laws limited the destructive consequences of interactions between warring hostiles. Our paper considers the ransom and parole system that emerged to govern maritime plunder between the citizens of warring European powers. It examines how this system was built on Coasean bargains between enemies, making it more efficient.<sup>3</sup>

## 2. A theory of more efficient plunder

Plunder's social cost has three sources: resources invested to steal others' property, resources used to defend against predation, and the deadweight loss of destruction. The first two sources are socially costly because resources invested to transfer or defend property aren't used to produce wealth. The third is costly because resources are literally and irrevocably destroyed. The pie of existing wealth shrinks.

Perfectly efficient plunder avoids each of these costs completely. It constitutes a costless transfer. If no resources were required to violently steal from others or defend against violent theft, and violent theft destroyed nothing, its social cost would

<sup>2</sup> Leeson (2010a) discusses mutiny on 18th-century merchantmen and the institutions that merchant sailors devised to overcome the collective action problem of maritime rebellions.

<sup>3</sup> Our analysis is also connected to Leeson's (2007b) investigation of "trading with bandits." Leeson explains how weak, would-be victims can and have used credit agreements to convert the incentive of stronger, would-be bandits from plunder to trade. Our paper examines how weaker agents who cannot avoid being victimized by stronger ones create contracts that facilitate their victimization but in doing so reduce plunder's social cost, making it more efficient. For an excellent discussion of the decision to "raid or trade" in the context of Indian-white relations, see Anderson and McChesney (1994).

be zero. Plunder would be an efficient reassignment of property from one holder to another.<sup>4</sup> Since, at a minimum, plunder requires time, it always involves a positive cost and perfectly efficient plunder is impossible. However, more efficient plunder is possible and can, under certain circumstances, approach the perfectly efficient ideal. More efficient plunder satisfies one or more of the following conditions. (1) It economizes on resources plunderers use to steal from victims. (2) It economizes on resources victims use to prevent being plundered. (3) It economizes on resources destroyed in violent struggles between plunderers and their victims.

Our theory of more efficient plunder is a special case of the theory of the gains from trade. The unique aspect of this theory's operation in the case of plunder is the source of those gains: plunder's social cost. That cost is also a private cost borne partly by plunderers. The more resources plunderers must expend to exploit their victims, the lower their return from plundering. Thus plunderers have an incentive to satisfy condition 1 for more efficient plunder—to economize on resources used to steal from victims.

The more resources victims must expend to prevent being plundered, the lower plunderers' return will also be from plundering. Resources victims use to deter plunder are resources plunderers can't steal. This gives plunderers an incentive to satisfy condition 2 for more efficient plunder—to economize on resources victims use to prevent being plundered.

Similarly, the more resources plunderers destroy in violent fights with their victims over property, the less they earn from plundering. This gives plunderers an incentive to satisfy condition 3 for more efficient plunder—to economize on resources destroyed in violent struggles with their victims.

Plunderers can conserve on resources spent to produce, to prevent, and that are destroyed during violent theft by striking bargains – forging “plunder contracts” – with their victims. In exchange for victims forgoing defensive investments to prevent being plundered and surrendering their property peacefully, plunderers agree to give some of it back to them. Victims are worse off than if they weren't plundered at all. But conditional on being plundered in the first place, they're better off than if they don't enter this agreement. Plunderers are better off by the amount of resources they save by inducing victims to forego defensive investments and to surrender their property peacefully (less the amount returned to their victims for acquiescence). This includes the resources they would have spent producing plunder, those that victims would have consumed in preventative measures and thus would have been unavailable for the taking, and those that would have been destroyed in violent clashes with their victims. Plunder contracts transform part of plunder's social cost into private benefits for plunderers and their victims. They make plunder more efficient.

The larger plunder's social cost is when plunder doesn't economize on the resources used in plunderous production, the resources victims use to prevent plunder, and the resources destroyed in the violent conflict plunder precipitates, the larger the space for mutually beneficial exchange through plunder contracts is, and thus the more likely it is that plunder will be conducted more efficiently. For example, plunder is more socially costly when the means of producing it are less specific than when they're more specific. In the former case, resources spent plundering have a higher opportunity cost: they could be used to produce a wide range of other things. In the latter case, resources spent plundering don't have many, or in the limiting case, any, alternative uses. It follows that the space for mutually beneficial exchange via plunder contracts is larger when the means of plunderous production are less specific. The plunderer's benefit of achieving a Coasean agreement with his victim is bigger in this case, making it more likely that he'll forge such an agreement with his victim.

Three conditions must be satisfied for plunderer–victim Coasean bargains to take place and thus for more efficient plunder to be possible. First, transaction costs must be sufficiently low to make exchange between plunderers and victims worthwhile. If a plunderer speaks English but his victim only speaks Swahili, striking such a bargain may be prohibitively costly. Transaction costs may also be prohibitively high if the bargaining process is protracted and thus the parties have difficulty reaching a mutually agreeable price because they're negotiating strategically to increase their share of the gains from trade. Similarly, if many parties must be brought into the negotiation to make Coasean plunder agreements possible, bargaining costs may exceed the gains available from forging such agreements, preventing them from coming into existence.

Second, information about the plunderer's and victim's strength must be symmetric. The plunderer and victim must agree that the plunderer is stronger. If the victim is delusional about his relative strength, he may believe he can obtain better terms than the plunderer offers through exchange by battling the plunderer. This prevents the parties from negotiating a Coasean bargain required for more efficient plunder.

Finally, plunder contracts must be enforceable. If either party to the plunder contract expects the other to renege, Coasean agreement is impossible. There are several ways that plunderers and their victims can make their contracts self-enforcing. A [Williamson \(1983\)](#) hostage exchange is one example. A plunderer and/or his victim may give his counterparty a hostage that's valuable to him but not to his counterparty to ensure contractual compliance. Or he may give such a hostage to a third party who destroys or releases it to his counterparty if he reneges. Alternatively repeated play may support Coasean plunder agreements. A plunderer who violates his agreement with a victim may find future victims unwilling to contract with him. If the plunderer is sufficiently patient, the shadow of the future can enforce his plunder contracts today. The

<sup>4</sup> For one influential model of the social cost of plunder, see [Buchanan \(1975\)](#). For another, see [Hirshleifer \(1995, 2001\)](#). For related discussions on the endogenous emergence of property rights and cooperation and conflict under anarchy more generally, see, for instance, [Anderson et al. \(2006\)](#), [Bush and Mayer \(1974\)](#), [Haddock \(2003\)](#), [Libecap \(2003\)](#), [Skaperdas \(1992, 2003\)](#), and [Umbeck \(1981\)](#).

specific ways in which plunderers and their victims make their contracts self-enforcing depend on the particular situations they find themselves in. In some cases hostage swapping without resorting to a third party may be effective. In other cases a third party may be needed. In still others reputation may be most effective, and so on.

### 3. Privateering and maritime plunder

Privateering in the 18th and 19th centuries provides a useful case for exploring our theory of more efficient plunder. Privateering began in 12th century as a form of self-help against maritime muggers. Several centuries later privateering's self-help role had given way to one by which cash-strapped nations prosecuted war against enemies at sea. Even into the 18th century, by which time European governments had grown their public navies considerably, their navies remained too small and weak to effectively conduct warfare on the water alone.<sup>5</sup>

Privateering remedied this situation by calling private initiative to the war effort. Although, as we discuss below, privateers were commissioned by and operated within the constraints of rules their governments created, interactions between privateers of one nation and the vessels of another were formally ungoverned and thus “anarchic.” There wasn't in the 18th and 19th centuries, as there isn't today, a formal supranational agency with the authority to oversee and control interactions between foreign countries, let alone belligerents. Foreign sovereigns and their citizens dealt with one another in an anarchic international arena.

Privateering was a form of maritime plunder. The way it worked is straightforward.<sup>6</sup> We focus on British and North American privateering. But the system worked similarly elsewhere. A group of investors sought a “letter of marque” from their government. This licensed them to send a private warship to sea over a stipulated time to plunder the merchant ships of an enemy nation (see, for instance, Admiralty Court Prize Papers 39, 1691; Admiralty Court Prize Papers 90, 1693; Admiralty Court Miscellanea 862, 1694; Admiralty Court Prize Papers 118, 1742; Admiralty Court Prize Papers 115, 1746; Admiralty Court Letter of Marque Declarations 12, f. 1, 1760). Investors earned a pre-negotiated share of any “prizes” their crew captured. Until the first decade of the 18th century, in return for commissioning the privateer, the British government entitled itself to a share of prizes as well. To encourage privateering it generously left off this practice in 1708.

There were two sorts of privateers: “letters of marque” and “private men-of-war.” The former were merchant ships engaged in trade but also licensed “to annoy the enemy and take their ships, as occasion shall offer” (P.C. Register 76, f. 142, 1695). Letters of marque were primarily traders. Their crewmen earned fixed wages like typical merchant sailors. But they also earned shares of any prizes their vessels might plunder while engaged in commercial activity.

Private men-of-war were private warships fitted specifically for the purpose of plundering enemy merchant shipping.<sup>7</sup> Private men-of-war didn't engage in commercial activity. Their crewmen were paid exclusively in shares and only if they plundered successfully. Whereas letters of marque were no more than ordinary merchantmen with licenses to plunder, since private men-of-war engaged only in plunder, they were typically smaller and without the large cargo-carrying capacity of merchant ships. This made them faster and more agile than merchantmen, though they carried more crewmembers and guns per ship tonnage.

Upon application to the Admiralty for a privateering commission, a privateer's owners signed a performance bond to secure its good conduct. The bond's value depended on the proposed vessel or crew's size (see, for instance, Admiralty Secretary In Letters 3878, April 12, 1744; Admiralty Secretary In Letters 3878, June 30, 1744; Admiralty Court Letter of Marque Declarations 12, f. 1, 1760).<sup>8</sup> As the instructions for a privateer that James II commissioned after his abdication read, “Before the ship put to sea, security is to be given to our . . . agent or his deputy for the due performance of the above articles” (Hist. MSS Commission, Stuart Papers, i, 92, 1694). If the privateer went about seizing neutral vessels or other ships prohibited under the terms of its commission, or operated outside the area or timeframe specified in this commission, it could forfeit its bond.

A privateer could also forfeit its bond if it was later discovered that its crew had misused enemy prisoners. The “law of nations” – the international law of war that European and North American governments respected and enforced on their citizens – protected prisoners.<sup>9</sup> As American privateer owner George Stiles' bond read for the *Nonsuch*, a ship he fitted out during the War of 1812, the bond was to ensure that the “said armed vessel shall observe the treaties and laws of the United States, and the instructions which shall be given to them according to law for the regulation of their conduct.”

The instructions referred to here, issued to every privateer when it received its commission, instructed the privateer “to pay the strictest regard to the rights of neutral powers, and the usages of civilized nations. . . . Towards enemy vessels and their crews, you are to proceed, in exercising the rights of war with all the justice and humanity which characterizes the nation of which you are members” (quoted in Garitee, 1977, pp. 94, 97–98). As the instructions George II issued to British privateers in 1739 read, “no Person or Persons, taken or Surprized in any Ship or Vessel as aforesaid, tho' known to be of

<sup>5</sup> On the history and development of privateering, see Starkey (1990).

<sup>6</sup> For excellent descriptions of the privateering system in the economics literature, see Anderson and Gifford (1991), Sechrest (2004), and Tabarrok (2007). For descriptions of the privateering system in the historical literature, see, for instance, Crowhurst (1989), Garitee (1977), Petrie (1999), and Swanson (1991).

<sup>7</sup> A bit confusingly these vessels were also commissioned via a document called a letter of marque.

<sup>8</sup> Sureties were also required for the performance bond.

<sup>9</sup> This paper considers the international law of war only in so far as it influenced the constraints privateers confronted in plundering merchantmen. For a discussion of this law, its emergence, and enforcement, see Anderson and Gifford (1995).

the Enemy's Party, shall be in Cold Blood killed, maimed, or by Torture and Cruelty Inhumanely Treated, contrary to the Common Usage and just Permission of War," under the threat of severe punishment for violating these instructions (quoted in Jameson, 1923, p. 349).

When a privateer overtook an enemy merchant ship, it was entitled to take its prize back to port in the commission-issuing country or, in some cases, a port in a friendly foreign nation (see, for instance, Admiralty Court Libels 117, No. 82, 1676; Letter of Marque Declarations I, f. 23, 1689; Hist. MSS. Commission, Stuart Papers, i, 92, 1694; Admiralty Court Prize Papers 118, 1742). In these ports were "prize courts" that determined the seized merchant vessel's status. If the court adjudged the prize legitimate – i.e., an enemy owned vessel – the ship and its cargo were condemned, auctioned, and the proceeds divided according to the terms established in the privateer's contract between its owners and crew. The prize court received an administrative fee. The government received its share (if any). And, most significantly, import duties on the receipts of the vessel's and cargo's sale were appropriated by the commissioning government, the privateer "duely and truly pay[ing] or caus[ing] to be paid . . . the usual customes due His Majestie for all ships and goods so as aforesaid taken and adjudged for prize" (Admiralty Court Prize Papers 63, 1719).<sup>10</sup>

The most common reason a prize court adjudged a prize illegitimate was that the prize wasn't in fact an enemy owned merchantman. Rather it was owned by citizens of a neutral power whose ire the commissioning government was eager not to raise, "it being our royal intention," a letter to the Lords of the Admiralty explained, "that . . . all engagements which subsist between us and our said good friends and allies should be most carefully and religiously observed" (S.P. Dom. Naval 60, April 30, 1744; see also, S.P. Foreign, Foreign Ministers, &c, 22, April 7, 1705; S.P. Dom. Naval 34, f. 265, 1744).<sup>11</sup> Like privateers, commercial vessels in the Age of Sail carried a variety of false flags and papers to prevent enemy privateers or navy warships from seizing them. Thus it wasn't always easy for privateers to discern whether a prospective prize was legitimate or not. If a mistake arising from such difficulty appeared honest to the adjudicating prize court, the vessel and its crew were released and the privateer received nothing. If the mistake was the result of negligence, the privateer's owners could be ordered to pay damages to the offended neutral vessel's owners. In cases of willful illegitimate seizure, or if mistakes became common, the offending privateer could forfeit its bond and lose its commission.

In addition to prohibiting privateers from mistreating merchant sailors they overwhelmed or killing such sailors in cold blood, the law of nations imposed some positive obligations on privateers. Privateers couldn't seize a merchant ship and dump its crewmembers in the water to fend for themselves. To condemn a captured vessel, prize courts required testimony from two or three merchant sailors from the vessels a privateer seized—typically the captain and a few officers. Privateers had two choices for other members of a quarry's crew: they could release the sailors if a vessel was available to send them home in, or they could take the sailors with them, requiring the privateers to provide for the sailors until they could be sent home via a prisoner cartel arranged in port or at sea. Under the rights the law of nations afforded prisoners, privateers were "bound for fair and safe custody [of captives], and . . . liable for any loss occasioned by their neglect or want of proper care. . . . In cases of gross misconduct on the part of private captors, the [captors' government's] court will decree a revocation of their commission" (Upton, 1863, p. 393).

Prisoner cartels were belligerent nations' means of exchanging prisoners in wartime. To ease the burden of providing for captured enemies, and to get one's own prisoners back, warring nations traded prisoners – man-for-man of equal rank – throughout (and sometimes following) conflict. Thus if Britain sent 15 French merchant sailors who British privateers had recently captured and returned to port with for adjudication to France, France would send 15 British merchant sailors of the same status to England.<sup>12</sup> The law of nations, which governed such arrangements, amounted to promises between sovereigns about prisoner treatment and similar matters. But European governments enforced this law on their own citizens. So it was generally upheld. A privateer that misused prisoners taken into custody by starving them, or dispatching them outside one of the accepted methods described above, jeopardized its prize, which the prize courts might release, as well as its bond, which the courts might seize.<sup>13</sup>

<sup>10</sup> Such duties could be extremely high, in some cases consuming 30–40 percent of a prize's value (see, for instance, Garitee, 1977, p. 183; see also Lydon, 1970, p. 91). Though, to further encourage privateering, at various times some colonial governments exempted privateer-obtained booty from onerous customs (Swanson, 1991, p. 15).

<sup>11</sup> This wasn't the only reason a prize may be adjudged "bad." But it was the main one. The British government also prohibited its privateers from "breaking bulk," i.e., disposing of plundered cargo before a prize court had adjudged it legitimate (though exceptions for unusual circumstances were permitted). This was another ground on which a prize may be adjudged illegitimate. According to a letter of marque issued to an East Indiaman in 1694 for plundering French merchant shipping, for example, "you are to keep in safety all such ships, vessels, and goods, which shall be taken in your voyages outward or homeward, and not break bulk, sell, wast, spoil, or diminish the same before judgment be first given in our Admiralty court in England or the East Indies respectively" (Admiralty Court Miscellanea 862, 1694; see also, Admiralty Court Prize Sentences 21, No. 140, 1697).

<sup>12</sup> Alternatively a privateer could place its prisoners on a ship and send them home after having them sign a declaration certifying their capture and release, which the privateer's government could then present to its enemy along with a request for the release of an equivalent number of its citizens held prisoner. For an example of this, see Fanning (1912, p. 187). For an example of an impromptu arrangement for prisoner exchange between a French privateer and its British prize, see Admiralty Secretary in Letters (3382, April 12, 1747).

<sup>13</sup> Besides the fact that governments punished their citizens who violated rules about prisoner treatment, privateers were also encouraged to comply with these rules through the use of bounties in certain cases. Governments sometimes offered "head money" for each sailor on an enemy merchant ship (or navy vessel) that a privateer overwhelmed. Returning home with prisoners was the most convincing (though not the only) way to evidence what head money was due and thus to collect bounties owed. In addition to this, prize courts, recall, relied on the two or three merchant sailors taken captive by a

Indeed, prize courts sometimes ruled against privateers in the case at hand based on their past mistreatment of prisoners when this was discovered. For example, the British privateer *Minerva* captured the *Anna* at the mouth of the Mississippi River in 1805. The justice presiding in this prize case, Sir W. Scott, discovered that before capturing the *Anna* the *Minerva* captured a Spanish vessel named the *Bilbao*. The privateersmen of *Minerva* set the *Bilbao*'s prisoners ashore on an uninhabited island near the mouth of the Mississippi. Justice Scott considered this “an act highly unjustifiable in its own nature.” Because of it, he refused to condemn the *Anna* (quoted in Roscoe, 1905, p. 399).

#### 4. Privateer–merchantman Coasean bargaining

##### 4.1. Ransom and parole

The potential social losses of privateer-committed maritime plunder are familiar: resources privateers devoted to transferring foreign merchant ship owners' wealth to themselves, resources merchantmen devoted to attempting to prevent privateer capture, and resources destroyed in violent conflict with merchantmen in privateers' efforts to appropriate their vessels and cargo. However, provided their interactions satisfied the conditions discussed in Section 2, our theory predicts that privateers and merchantmen would enter Coasean contracts, facilitating more efficient plunder.

As that theory suggests, central to this possibility was the costliness of producing plunder for privateers. Privateers' cost of producing plunder had several sources. The first was violent conflict with a merchantman. This cost of producing plunder resulted from privateers' failure to use Coasean bargains to induce potential victims to forego making defensive investments—a failure that in turn resulted from a failure to satisfy one of the three conditions required for such bargains to come into existence identified in Section 2: sufficiently low transaction costs.

In principle privateers could have struck agreements with merchantmen not to arm or undertake other defensive measures in consideration for receiving a larger fraction of the goods privateers would otherwise seize from them if they overwhelmed them. Both parties had an incentive to create such an agreement. If, say, a merchantman could save \$150 worth of goods from being plundered by making a defensive investment that cost it \$100, both parties could benefit by forging an agreement in which the merchantman agreed not spend anything on defensive investments in exchange for the privateer agreeing to seize \$60 worth of goods less when it plundered the merchantman.

Such bargains proved impossible in practice, however, because privateers' strengths varied. The price a privateer would be willing to pay to a merchantman in the form of more returned goods following plunder depended on its strength. Stronger privateers would have a lower maximum willingness to pay to induce victims to forgo defensive investments. Weaker privateers would have higher ones.

Since a Coasean bargain inducing victims to forgo such investments would have to be forged *ex ante* – i.e., before merchantmen took to the water – this would have required each merchantman to strike a separate agreement with each privateer. Given the many privateers that might attack them, this would have been prohibitively costly. Alternatively, if every privateer could agree with every other privateer to take to the water with the same vessel, number of guns, men, and so on, such that all would have the same strength, merchantmen would only have to conclude one contract with all privateers. But in this case prohibitive transaction costs would have entered through another door: that of each individual privateer contracting with all others.

Because of the prohibitive transaction costs of doing so, privateers and merchantmen were unable to create Coasean bargains that would have precluded the latter's defensive investments, leaving this source of plunder's social cost unmitigated. Merchantmen invested in defensive measures that could prevent some privateer plunder.

Merchantmen's defensive investments took several forms. First, merchantmen invested in guns for their ships. As we discuss below, the average merchantman in the mid-18th century of some 240 tons carried 28 guns (Swanson, 1991, pp. 61, 71). Similarly they could employ vessel shapes/sizes that made them faster for battle maneuvering. Second, merchantmen sometimes sailed along outlying or less desirable routes where privateers were less prevalent or didn't sail.<sup>14</sup> Third, merchantmen sailed together in convoys instead of individually, which made them harder for privateers to attack (see, for instance, Martens and Horne, 1801). Closely related, to reduce the threat privateers posed, merchantmen resorted to “direct voyages,” which ran to a single port and back, instead of engaging in more lucrative “multilateral voyages,” which involved visits to several ports before returning home (see, for instance, Morgan, 1989).

These defensive investments were costly to merchantmen and society. They hindered merchantmen's capacity to serve as merchant ships, reducing their profits, and in doing so retarded merchant shipping's ability to produce wealth. Cannon took up room that cargo would otherwise occupy. Their added weight slowed the carrying vessel down. A sharper-built vessel could reduce the merchantman's cargo capacity and undermine its stability for long cargo-carrying expeditions. Similarly, an outlying route was a longer one or undesirable for other reasons, such as being harder to sail. Using it cost a merchantman precious time and could increase the odds of a wreck, delay, or damage due to less favorable waters and weather. Convoys were also costly. They required multiple merchantmen to coordinate their sailing dates, routes, and stops, creating a travel

privateer to testify at its prize hearing. If privateers hoped for favorable testimony, it behooved them not to mistreat these prisoners.

<sup>14</sup> Still another social cost of privateering plunder manifested in the form of defensive investments by merchantmen was the cost of training merchant sailors to be adept at seaborne conflict.

“package” whose elements differed from those that convoy members would choose individually if they were unconstrained by the need to sail in consort with others.

These defensive investments not only reduced wealth by diverting resources that could otherwise be used for productive purposes to the prevention of plunder. They also reduced wealth by raising the cost of merchant shipping, which reduced the number of merchant ships engaged in trade.

A fourth “defensive investment” of sorts that merchantmen resorted to might also be added to the ones listed above: insurance. Insurance didn’t prevent or deter privateer attacks.<sup>15</sup> But it partly reflected merchantmen’s attempts to mitigate the losses of privateer plunder. And higher insurance premiums because of privateer threats contributed to merchant shipping’s cost and thus the associated reduction in wealth-creating merchant shipping activity that higher shipping costs engendered.

Because transaction costs prevented Coasean bargains that would have ensured merchantmen disarmament, most merchantmen were armed. If a merchantman resisted a privateer’s advances, running, or engaging its attacker, a bloody melee was likely to ensue. This contributed to plunder’s cost for privateers. Although privateers were typically much stronger than the merchant vessels they attacked, even a significantly weaker merchantman was capable of putting up a fight. A merchantman couldn’t only damage the privateering vessel. It could injure or kill the privateer’s crewmembers. Captain Harriot’s St. Kitts-based privateer discovered this when it engaged a French merchantman near the Calicos Islands in 1744. The merchantman fought back, killing 18 of Harriot’s privateer crew and injuring many more (Swanson, 1991, p. 198). Even if a merchantman wasn’t strong enough to significantly damage its attacker, if the two came to blows, damage to the merchantman and its cargo hindered the privateer’s ability to bring its prize safely to port and reduced what the prize could fetch at auction. In extreme cases the entire prize might be lost, leaving the privateer with nothing to show for its efforts.

Privateers confronted two other costs of producing plunder: the cost of bringing the victim to a prize court to adjudge its legitimacy and the cost of carrying and providing for captured merchant sailors. Privateers could and did seize prizes considerable distances from the nearest prize court. Even when they didn’t, the nearest prize court located at the port where their plundered goods had the greatest market could be far. A privateer that had to return to shore after taking each prize lost considerable time in transit that could be spent plundering instead. More important, traveling any distance back to port was a risky endeavor. At some point every privateer needed to return home. But the more trips a privateer made between port and its cruising ground, the greater were the risks it would never make it back.

The high risk of additional back-and-forth trips had several sources. One was the unavoidable chance of sea-borne travel, such as the prospect of shipwreck or a related nature-driven tragedy. But the most significant risk of such trips was manmade: the possibility of destruction or capture by the enemy. This danger was especially high when to return with a merchantman to the nearest prize court a privateer had to break through an enemy blockade (see, for instance, Crowhurst, 1989, p. 36). If it negotiated the blockade unsuccessfully, the privateer stood to lose not only its prize to the enemy, but its freedom as well.

If a privateer had enough crewmembers, it could place some of its men on the prize to create a “prize crew” to return to port for consideration by a prize court, allowing the privateer to remain at sea. However, some privateers were too small to do this. “Many of the [French] corsairs . . . in the eastern half of the English Channel” in the late 18th and early 19th centuries, for example, “carried a handful of men which was barely adequate to sail the ship and provide prize crews” (Crowhurst, 1989, p. 53). Even for larger privateers that had enough men to form prize crews, delivering victims to prize courts remained costly. Putting enough men on a captured quarry to create a prize crew weakened the privateer significantly, reducing its ability to take future prizes and defend itself against attack. The British privateer *Sheerness* had to let five potential French prizes escape because its crew remained too small for the task, most of its members having departed previously on prize crews (Swanson, 1991, p. 63). Further, prize crews, like the privateers that created them, faced the threat of capture en route to port. In the War of 1812 less than one third of American prize crews made it to port (Garitee, 1977, p. 170). Many of these lost their freedom to British privateers and navy ships on their way to prize courts.

The third important cost of producing plunder for privateers was carrying and providing for the merchant crews they overtook. The law of nations required privateers to care for their captives until they were brought to port or could be exchanged via a prisoner cartel. Provisions used to support prisoners reduced those available to privateer crewmembers, shortening the duration of plundering cruises since re-provisioning became necessary more often.<sup>16</sup> Taking on prisoners posed another problem: the prisoners might revolt. This prospect was most significant on a prize crew. During the American Revolutionary War, the American privateer *Yankee* captured two British merchantmen and put prize crews aboard both. The *Yankee*’s crew must have been disappointed when British prisoners overwhelmed both prize crews and managed to seize control of the *Yankee*, making the American privateersmen the captives (Coggins, 2002, p. 68).

To avoid these costs of plunder, which not only constituted social costs, but also private costs for privateers, many privateers resorted to plunder contracts with merchantmen they overwhelmed. As we describe below, unlike Coasean contracts that could have induced victims to forego defensive investments to prevent plunder, Coasean contracts that could induce victims to surrender their goods peacefully once attacked, which permitted privateers to avoid the costs of plundering

<sup>15</sup> On the contrary, insurance could actually encourage privateer attacks since it made merchantmen more likely to acquiesce in the face of a privateer attack.

<sup>16</sup> The merchantman’s provisions could be seized to help address this problem. But any provisions that had to be used to support captured merchant sailors were provisions the privateer couldn’t enjoy the revenues of from being sold at auction at a prize court.

described above, could in some cases satisfy the conditions required for such bargains to come into existence, and thus were possible. In these cases privateers and merchantmen forged them. The resulting contracts formed the basis for the system of “ransom and parole.”

After overwhelming a merchantman, such a privateer offered its victims the following bargain: for a price it would allow the merchant vessel, its cargo, and its crewmembers their freedom. If the price was right, this arrangement was mutually beneficial. Provided the price agreed on in the plunder contract was higher than what the privateer expected to earn if it plundered its victim traditionally and thus had to incur the costs discussed above, it was happy to enter such a contract.

Consider French privateer captain Nathaniel Fanning’s reasoning, whose crew aboard the *Comte de Guichen* “ransomed . . . two [British merchant] ships . . . for three thousand two hundred guineas; and the brig and cargo for five hundred.” Although “these two sums were not more than half the value of these vessels,” Fanning noted, “we thought it more prudent to ransom them for this sum than to run the risque of sending them to France” (Fanning 1912/Fanning, 1912, p. 139). Similarly, consider privateer captain William Ashion’s reasoning, who sought to avoid the cost of creating a prize crew when he entered a plunder contract with the *Wife of Sable d’Ollone*: “the Master thereof proposing to Ransom . . . considering the number of men they had on board, and that he could not send her for this Island, without coming along with her, which should have been a great hindrance to him,” Ashion was pleased to negotiate a plunder agreement with his victim instead (quoted in Bromley, 1987, p. 344).

Provided the price agreed on in the plunder contract was lower than what the merchantman expected to lose if the privateer plundered it traditionally – lower than the value of the ship, its cargo, and the value the merchantman’s crewmembers attached to their freedom – it was also happy to enter such a contract. As Fanning describes in his case, the merchantmen got an excellent deal, paying only half the value they would have lost without the plunder agreement. Such an arrangement benefited both parties by preventing the destruction of valuable vessels, cargo, and men. The possibility of such an offer lowered merchantmen’s cost of being plundered, encouraging them to submit to stronger privateer attackers. This permitted the plunder process to proceed peaceably rather than through violence, avoiding the deadweight losses of violent conflict.

If a mutually agreeable ransom price could be arrived at, the merchantman and privateer drew up a written contract in duplicate called a “ransom bill” stating the agreement’s terms. Under these terms the merchant ship captain obligated his ship’s owner, and failing that, himself, to pay the privateer upon presentation of the bill. In return the agreement entitled the merchantman to safe passageway, or “parole,” without plunder by other privateers from the ransoming privateer’s nation or allies, to a specified port within a proscribed period of time and in some cases via a proscribed route. If the merchantman were approached by another privateer from that nation or one of its allies en route, it needed only to produce the ransom bill and the privateer would customarily allow the ship to continue on its way.

Consider the ransom bill contracted between a British privateer, the *Ambuscade*, and its French merchant ship victim, *Le Saint Nicolas*, circa 1711 (Admiralty Court Prize Papers 91, 1711)<sup>17</sup>:

Whereas on the seventh day of October, old style, 1711, the ship called St Nichola of Sable d’Ollone, near Rochelle, whereof Jacque Ayreau is commander, together with her cargo as follows, viz. nine thousand Bank fish, and forty hogsheads of salt, and four hogsheads of oyl, or thereabouts, was taken prize by the *Ambuscade* of Bristol, a private man of war, Robert Summers commander, by virtue of a commission bearing date in London the twenty ninth day of March 1711. And whereas the said Robert Summers is willing, at the instance and request of the said Jacque Ayreau, together with the said ship and cargo, to proceed on his intended voyage to Nants, or any first port in France, upon condition that the aforesaid Jacque Ayreau shall pay or cause to be paid unto the said Robert Summers, or his executors, administrators, or assigns, the full sum of eleven thousand five hundred livres tournois, French money, which makes nine hundred and fifty sterling money of England, at twelve livres the pound, to be paid in London for the Ransom of the above ship and cargo. . . . And I Jacques Ayreau to hereby bind myself, my heirs, executors, and assigns, for the true payment of the said sum as above . . . as before agreed on, unto the said Robert Summers, his heirs, executors, or assigns. In Witness whereof we have set our hands and seals this seventh day of October 1711, old stile.

[signed] Joachim Bruneteau.

[signed] Andre Caillaud.

Signed, sealed, and delivered in the presence of us, Testes, Richard Pym, Fran. Gandouet.

Memorandum. I, Jaque Ayreau, do acknowledge and confess that no Barbarous or Uncivil Treatment has been used to me of any of my Men, nor no Imbezlement nor Pilferage have been actually done to my ship or cargo by the said Robert Summers, his officers or Company, since the aforesaid Agreement; And that it is agreed between me and the said Robert Summers that I shall be allowed seventy Days to accomplish my Voyage afterward, and no more; And that I do well and truly understand the Bargain and Agreement as aforesaid.

Je recognois avoir ransomme ledit navire Le Saint Nicolas pour la somme de vinze mil cinq livres tournois argent et monnois de France.

<sup>17</sup> Unless otherwise noted all 17th- and 18th-century documents cited in this paper are reprinted Marsden (1915–1916 II).

[signed] Jacques Ayreau.

As our theory highlights, this kind of Coasean plunder contract is most likely when the means of plunderous production are relatively non-specific and thus the gains of negotiating such an agreement are largest. Privateering was close to the ideal in this respect because privateers' plunderous capital was highly non-specific. Most privateers were simply modified merchant vessels. As *Rajan and Zingales (1998)* point out, asset owners have incentives to develop their assets in ways that retain their value in alternative uses—to avoid making specific investments. This is as true for plunderers, such as privateer owners, as it is for anyone else. Privateer owners benefited by investing in vessels that were useful in non-plunder related production, such as commercial voyages, in addition to being useful for producing plunder. Privateer owners accomplished this by modifying existing merchantmen to build their ships or, when seeking purpose-constructed private men-of-war, by building privateers generically enough to be useable in merchant shipping when not plundering.

Recall the two types of privateers: merchantmen with a commission to plunder (“letters of marque”), which differed from ordinary merchantmen only by virtue of their raiding license and the fact that they might carry a few extra guns, and private men-of-war, which were often smaller and had less cargo-carrying capacity than typical merchantmen. Nearly all other basic elements of private men-of-war were the same as typical merchantmen. Thus they could be easily converted to regular merchantmen when not employed for plunderous purposes. Indeed “the majority” of private men-of-war were merely “merchantmen converted for the task” (*Starkey, 2001, p. 72*; see also *Swanson, 1991, pp. 57, 120*).

Converting private men-of-war back to merchantmen when war ended was equally straightforward. More than 90 percent of the privateers that went to sea from America's chief privateering port in Baltimore in the War of 1812 were schooners—vessels identical to the brigs preferred in merchant shipping save their rigging.<sup>18</sup> Similarly, 50 percent of Massachusetts' early 19th-century privateering fleet consisted of schooners. 66 percent of New York's privateering fleet did as well (*Garitee, 1977, pp. 166, 114*). If they weren't already fit for a particular merchant shipping need, by simply modifying their sail setups, many “sharp-built” schooners could easily be made so. And, when war ended, this is precisely what many privateer owners, or individuals who purchased ex-privateers, did (*Garitee, 1977, p. 220*).<sup>19</sup>

The switch was still cheaper for privateers that were letters of marque. These could be “converted” to regular merchantmen simply by taking one or two guns off them.<sup>20</sup> Even this “conversion” wasn't required: letters of marque *were* merchant ships. For them, costs saved through plunder contracts over producing plunder traditionally, such as the travel time involved in going back and forth to prize courts with prizes, translated directly into socially productive activity – more time spent commercial shipping – even before war ended.

Letters of marque were numerous—more numerous in many cases than private men-of-war. For instance, 7100 of the 9151 British vessels that sought privateer commissions between 1739 and 1815, or nearly 78 percent, were letters of marque (*Starkey, 1997, p. 130*). Similarly, in the War of 1812, 114 of Baltimore's 175 privateers, or over 65 percent, were letters of marque (*Garitee, 1977, p. 166*). These vessels' capital was equally well suited for productive (commerce) and non-productive (plundering) purposes, permitting them to quickly and inexpensively “transform” their capital's application to commerce and plunder as they found convenient.<sup>21</sup>

#### 4.2. Conditions for privateer–merchantman plunder contracts and their breakdown

Section 2 identified several conditions that must be satisfied to make Coasean plunder contracts possible. Transaction costs must be sufficiently low, information about the plunderer's and victim's strength must be symmetric, and plunderer–victim bargains must be enforceable. Many, but, as we discuss below, not all, privateer–merchantman relations satisfied these conditions for bargains that reduced the cost of producing plunder and reduced the deadweight loss of destruction in connection with privateer–merchantman conflicts. This permitted some privateers and merchantmen to forge Coasean agreements like the one recounted above, facilitating more efficient plunder.

Two types of potential transaction costs threatened to render privateer–merchantman contracts like the one described above unprofitable by overshadowing the gains of such agreements. Both had their source in potential bargaining difficulties. The first was the simple fact that since privateers and their victims were necessarily from different countries, they spoke different languages. This meant they didn't always know the language of the other, or not well enough to negotiate contracts. If privateers and merchantmen couldn't communicate because of language barriers, they couldn't forge Coasean plunder contracts.

<sup>18</sup> While schooners were fore-and-aft rigged, brigs were square rigged.

<sup>19</sup> *Anderson and Gifford (1991, p. 114)* note that following war's end smaller privateers were often sold as merchantmen, similarly suggesting privateers' low-cost convertibility.

<sup>20</sup> Besides adding a few guns, the only other notable way in which a merchantman was modified to make her fit for a letter of marque was perhaps some reinforcement of the bulwarks and additional siding to make her sturdier.

<sup>21</sup> Contrast this situation with the situation that navy warships confronted. Although these vessels were primarily concerned with handling enemy navy warships rather than enemy commercial vessels, they, too, could and occasionally did assault merchant shipping. However, unlike privateers, which were often no more than slightly modified merchant ships, the plunderous capital embodied in navy ships was highly specific. These ships were designed exclusively for warfare and had no commercial use. They were massive, built to engage in and withstand heavy fire, and carried an extraordinary number of guns. Naval vessels' gains from entering Coasean exchanges with their victims were therefore smaller than that of privateers, leading them to enter them less often and engage in traditional plunder more often instead.

Privateers developed a simple solution to this problem: they created template plunder contracts in multiple languages. During the War of the Spanish Succession (1701–1714), when France was at war with Britain, Portugal, Holland, and several other countries, French privateers carried multiple, generic plunder agreements—one in French, and the others, translations of the French template into the their enemies' languages so their foreign victims could read them (Senior, 1918, p. 52).

The second type of transaction cost that threatened to overwhelm the prospective gains from privateer–merchantman plunder agreements of the kind considered above was the time required to negotiate such agreements. A privateer and its victim merchantman confronted a classic bilateral monopoly problem in which, because of the unusual monopolistic and monopsonistic nature of the market, the process of converging on a mutually agreeable price can be long and tedious. Fortunately, although the “plunder market” that a privateer and its victim merchantman operated in consisted of only one seller and one buyer, the merchantman's vessel and cargo, which the privateer sought, were bought and sold in competitive markets with many sellers and many buyers.

Since the privateer and merchantman both had an idea about the prevailing market prices for these goods, the maximum price the privateer could reasonably expect the merchantman to pay in lieu of these goods and the minimum price the merchantman could reasonably expect the privateer to accept in lieu of these goods were brought close together. Remaining haggling to influence the distribution of the surplus the agreement created was thus delimited and reflected unknowns, such as the value the different parties attached to the merchant crewmen's freedom, the odds the privateer or its prize crew would be seized en route back to the nearest prize court, and so on. Thus privateers' and merchantmen's bargaining ranges were narrowed significantly, lowering the transaction cost of negotiating Coasean plunder agreements.

The second condition privateers and merchantmen had to satisfy to enable Coasean agreements between them was symmetric information about their strengths. As noted above, the most important difference between merchantmen and privateers was the larger number of crewmembers and guns (per ton) the latter carried. Between 1739 and 1748 the average privateer that plied the sea was 166 tons, carried 35 guns, and had 100 crewmembers. The average privateer victim in this same period was 45 percent bigger (241 tons), but carried 7 fewer guns and had only 11 more crewmembers (Swanson, 1991, pp. 61, 71). Thus a privateer that attacked a merchantman of equivalent size boasted significantly greater firepower and manpower. This gave privateers the upper hand in both ship-to-ship and hand-to-hand combat.

Besides knowing that the average privateer of equal size was stronger, merchantmen also knew that privateers aimed to attack significantly weaker ships since doing so made their job easier. Knowing this, conditional on being assaulted by a privateer, a merchantman also knew it was probably the weaker party and likely to lose a fight if it resisted. As privateer historian Garitee (1977, p. 148) put it, “The captain of a [privateer-attacked] merchant vessel [typically] knew he was confronting a heavily manned, better-armed, and swifter opponent.” Thus many merchantmen found it in their interest to submit peacefully to their plunderers, particularly when they expected Coasean bargaining opportunities that could improve their post-plunder positions. Since “Most merchant ships were outsailed, outmanned and outgunned by almost any privateer . . . the crew meekly surrendered when escape was impossible” (Crowhurst, 1977, p. 36; see also, Crowhurst, 1997, pp. 156–157). Consequently “The great majority of captures were made without resistance” (Bromley, 1987, p. 356).

Finally, recall that for Coasean plunder contracts to be possible both privateers and merchantmen required reason to believe the other party would fulfill their end of the agreement. Privateers and merchantmen achieved this through several means. From merchantmen's perspective the central problem was ensuring that other privateers from their captor's nation wouldn't plunder them a second time while en route to their specified destination as the terms of their contract promised to protect them from. Reciprocity between privateers from the same or allied nations was one means of ensuring this.

Most important was privateers' governments' unwillingness to adjudge a “doubly seized” merchantman a good prize. For much of the 18th century European governments recognized privateer–merchantman plunder contracts as legally binding on the privateer that issued them and protected the privateer's right as first captor to sell parole prohibiting subsequent captors from his nation or his nation's allies from seizing the merchantman again. The American government continued to recognize such contracts' legitimacy into the 19th century. Governments' refusal to award doubly seized merchantmen as prizes to their captors dramatically reduced privateers' incentive to violate the terms of plunder contracts their compatriots negotiated with enemy merchantmen they subsequently caught up with. Because of this, merchantmen were confident the terms of their Coasean bargains with privateers would be respected.

The more significant potential enforcement difficulty was from privateers' perspective. After granting a merchantman its freedom, how could a privateer ensure it would be paid? Three mechanisms were critical to ensuring contractual compliance. First, privateers often required a hostage from their victim – typically the captain of the ship or one of his officers – who they would take with them and release only after being paid. Privateers and merchantmen negotiated the terms of such hostages, and even how they would be cared for, in their plunder contracts. Consider the hostage terms of the ransom bill entered into between the French merchantman and British privateer recounted above (Admiralty Court Prize Papers 91, 1711; see also, Fanning, 1912, pp. 126, 139):

And it is agreed by and between the said Robert Summers and the said Jacque Ayreau that he the said Jacque Ayreau shall leave some Hostages or Ransomers in the possession of the said Robert Summers . . . for and till the true payment of the abovesaid sum so agreed upon for the Ransom of the said ship and cargo, and shall also bind himself, his heirs, executors, administrators, and assigns, for the true payment thereof, and the Redemption of the Hostages, with the allowance of three shillings and four pence per day for the victualling of the said Hostages from the date hereof until the time of their arrival in England and being released &c, to be likewise well and truly paid . . . with all other charges

that may occur until the time of the Hostages being released. Now these Presents witness that we Jonachim Bruneteau and Andre Caillaud, at the instance and request of the said Jacque Ayreau are willing and voluntarily oblige ourselves to become Hostages and Ransomers for the said ship and cargo, and to remain so until the abovesaid sum . . . agreed upon, with the allowance aforesaid, be fully paid and satisfyd.

The second means privateers used to enforce the terms of their plunder contracts with victim merchantmen was state courts. For much of the 18th and 19th centuries governments recognized plunder contracts as legally binding. Britain forbade alien enemies, such as foreign privateer owners, from directly initiating legal action against their citizens in their courts. A privateer owner couldn't sue a British merchantman that violated its plunder contract with the aid of Britain's courts.<sup>22</sup> However, British law recognized a merchant captain's right to enter a plunder contract that obligated his ship's owners to a privateer: "He is the agent of these owners, lawfully authorized to enter into such contracts . . . His signature therefore binds them as debtors of the ransom" (Wheaton, 1815, p. 236). When a merchant ship captain signed a ransom bill he also obligated himself to pay his captor the agreed on sum if his ship's owners failed to. Crucially the law granted him a right of action *in rem* against the ship owners' vessel in this case to recover the ransom sum he paid the privateer to gain his freedom in lieu of the owners or, more likely, since most hostages didn't have the funds required to pay this sum, to recover his freedom by compelling the owners to pay the privateer. Because of this, privateers were able to initiate action against non-paying merchantmen indirectly through their hostages whose incentive was aligned with privateers'.

For example, in 1696 British merchant ship captain John Munden of the *Reyner* entered a plunder contract with French privateer captain Louis Daincon of the *Phillipicene*. According to their contract Munden promised to "pay, or cause to be paid, to Daincon the sum of £170 sterling, and give himself up as a prisoner for the payment of that sum." However, the *Reyner's* owners "never paid the bill." Munden sued the *Reyner* from his St. Malo prison, as the law entitled him to, and succeeded. The *Reyner's* owners were compelled to uphold their end of the plunder contract. The *Phillipicene* received the payment it was due. And Munden recovered his freedom (Admiralty Court Libels 126, No. 107, 1698; see also, Admiralty Court Libels 130, No. 237, 1713).<sup>23</sup> In this way a privateer could rely on its hostage's incentive to use the law to compel non-paying merchant ship owners to comply with the terms of their plunder contracts, ensuring contractual enforcement.

The third method privateers used to enforce plunder contracts with victim merchantmen was repossession. Privateers chiefly resorted to repossession after Britain and France banned their citizens from partaking in plunder contracts, which we discuss below. The way repossession worked was simple. If a known, non-paying merchantman was spotted in a foreign port, its privateering creditors, or someone on their behalf, would seize it (Petrie, 1999, p. 23). Although after 1782 Britain and France no longer viewed plunder contracts entered into by their merchantmen as legally binding, the rest of Europe's governments and those of North America did. These governments permitted repossession enforcement in their ports. As an early 19th-century legal digest describing the law of maritime capture and prizes stated, although "no [plunder] contract can be enforced against a British subject in the courts of his own country[,] There is no such prohibition by the municipal laws of other states, and the contract may therefore be enforced in them" (Wheaton, 1815, p. 232). Repossession was the chief means of doing so.

Many privateer-merchantman interactions satisfied the conditions required for Coasean plunder agreements that reduced the cost of producing plunder and the deadweight loss of destruction, enabling more efficient plunder. According to historian of privateering Swanson (1991, p. 204), while "It is difficult to determine how often prizes were ransomed," before Britain and France outlawed plunder contracts they were common. Indeed, this is why the British and French governments had to resort to legislation to curb the practice in the first place.

Eager to realize the benefits of entering plunder contracts, some merchant ship owners encouraged their captains to seek ransom if privateers seized them. Before merchantman owner John Reynell sent his ship the *Bolton* to Antigua he instructed its captain that "In case of being taken," the captain should "Endeavour to ransom if thou cans't for Twelve Hundred Pounds Sterling (if Sugar Loaden, may'st advance as much more as thou thinks Reasonable) and draw for the same on Birkett and Booth of Antigua, on Elias Bland of London, or on us here and the Bills shall be honourably paid and the Hostage fully Satisfied for his time, Expences, etc." Similarly, Gerard Beekman, owner of the *Dolphin*, advised his ship's captain that "As you[r] Vessell is Loaded only with Lumber and is very old Can be of Lettle worth to an Enemy. in Case you Should be taken Which God forbid you may Give them fifty Pounds Sterling as a ransom for her again for She will not be worth that to them" (quoted in Swanson, 1991, p. 204).

Although little systematic data exist to measure the popularity of Coasean plunder contracts in 18th- and 19th-century privateering precisely, what data are available suggest that while such contracts weren't the rule, neither were they exceptional. Between 1776 and 1783, when the American Revolutionary War was waged, foreign privateers captured 3386 British merchantmen. Of these, privateers ransomed 507, approximately 15 percent. In three of these years no ransoms were recorded. When these years are excluded the percentage of British merchantmen that entered plunder contracts with their captors rises to nearly 19 percent. To put this in perspective, the Royal Navy succeeded in retaking only 495 British mer-

<sup>22</sup> Though, for discussion of an exception, see Senior (1918, p. 54).

<sup>23</sup> If the hostage wasn't the ship captain, the captain might be tempted to ransom the ship fraudulently to secure its release—i.e., to enter a plunder contract for a price that exceeded the ship's and its cargo's value without intending to honor the agreement. However, this was prevented by two factors. First, as we discuss below, privateers had an idea of the market value of ships and their cargoes, limiting merchant captains' ability to get away with such fraud. Second, the hostage had a right of action against his captain for fraud if his captain did this (see, for instance, Marsden, 1915–1916 II, p. 398).

chantmen seized by privateers (Wright, 1928, p. 156). Thus plunder contracts “saved” more British merchantmen than the government’s official navy. According to Senior (1918, p. 57), in the same war French privateers ransomed more British merchantmen than they returned to prize courts with.

Other data on the frequency of plunder contracts suggests they were still more common. Between 1688 and 1607, during the War of the Grand Alliance, French privateers leaving from St. Malo, one of France’s major privateering ports, ransomed more than 30 percent of all merchantmen they captured. Between 1702 and 1712, during the War of the Spanish Succession, these privateers ransomed nearly 24 percent of all prizes they captured (Crowhurst, 1977, pp. 18–19). In these same years Dunkirk and Calais privateers ransomed more British and Dutch merchantmen than they took to prize court, nearly 56 percent of those they seized. All told, during the War of the Spanish Succession, French privateers entered plunder contracts with 2118 merchantmen, almost 30 percent of the total number they captured (Bromley, 1987, pp. 67, 223).

Although plunder contracts were a common feature of 18th- and 19th-century maritime marauding, they were less common than traditional plunder. Many privateers chose to plunder their victims in the usual way instead of through Coasean bargains. These privateer–merchantman interactions failed to satisfy the conditions discussed above required for plunder contracts to be formed. Privateers and merchantmen misjudged each others’ strength; plunder contracts proved unenforceable; the transaction costs of bargaining proved prohibitively high; and privateers’ cost of producing plunder traditionally was sometimes low, shrinking the benefit of plunder contracts. Coasean agreements weren’t possible in these cases. So privateers plundered merchantmen without them. Because of this, conflict between privateers and merchantmen that destroyed valuable resources occurred; privateers expended resources dragging every captured merchantman back to shore for prize court adjudication; and merchantmen lost their vessels, cargoes, and crewmembers’ freedom. Plunder’s social losses in such cases stood where conventional wisdom suggests they always are: at their maximum.

In some cases merchantmen fought their privateering aggressors because they misjudged their strength. Although in many cases a merchantman could conclude by virtue of coming under attack that it was weaker and likely to lose in a violent contest, privateers could miscalculate their own strength leading them to mistakenly assault stronger vessels. The average privateer was much stronger than the average merchantman. But owing to the variation in privateer strengths noted above, that didn’t preclude some privateers from being weaker than some merchantmen. If the former erred in which ship they attacked, a fight was likely to result. In February, 1815 Captain Boyle’s American privateer, the *Chasseur*, spotted an innocent-looking schooner with only three gun ports and made for her. Imagine the *Chasseur*’s surprise when, upon closing on her, the schooner revealed seven hidden gun ports. The formidable 10-gun quarry proved to be His Majesty’s *St. Lawrence*. The *Chasseur* prevailed that day but was prizeless for her efforts. The *St. Lawrence* was “a perfect wreck in her hull and had scarcely a Sail or Rope Standing” (Garitee, 1977, p. 161). The *Chasseur*, too, sustained damage to her rigging and sails from the battle besides losing five men and having seven injured.

Merchantmen were capable of making their own mistakes, wrongly believing they were stronger than their assaulter, in which case they may hazard a conflict rather than negotiating a Coasean agreement, again preventing more efficient plunder.<sup>24</sup> In January, 1813 Captain Stafford’s American privateer, the *Dolphin*, engaged two merchantmen off the coast of St. Vincent. The merchantmen didn’t yield to the *Dolphin*’s advances, believing their joint strength was enough to overwhelm the *Dolphin*. They were wrong. Although the merchantmen’s joint forces were in fact superior to the privateer’s, the *Dolphin* proved more effective with 10 guns and 60 men than the merchantmen did with more than twice as many guns and five more men (Coggeshall, 1856, p. 128). Unfortunately the merchantmen didn’t realize their mistaken judgment until after the bloody battle that led to their capture.

In other cases Coasean plunder agreements weren’t created because they couldn’t be enforced. In 1782 the British government legally barred its merchantmen from entering plunder contracts with privateers. In 1793 it prohibited British privateers from entering plunder contracts with their merchantman victims. Similarly, in 1756 France began restricting its citizens’ use of plunder contracts. First, the government forbade French privateers from ransoming merchantmen until they had brought at least three prizes to port. Then, in 1782, the French government prohibited its citizens from entering plunder contracts as plunderers or victims. After these years neither the British nor French government could be relied on to enforce plunder contracts against their citizens.

Because they benefited from them, some British and French merchantmen continued to enter plunder contracts with privateers despite their governments’ ban. British merchantmen continued to offer ransom bills to American privateers throughout the War of 1812, a full 30 years after parliament criminalized such contracts (see, for instance, Garitee, 1977, pp. 272–272; Petrie, 1999, pp. 22–23). And American privateers continued to accept them, relying on the threat of repossession for enforcement. Privateers remained “justified in their expectations of payment” from British and French victims even after their governments criminalized plunder contracts “because the vessels were merchant ships.” As noted above, “A merchant ship owner who didn’t pay his obligations simply couldn’t trade in foreign ports in the future or his vessel would be seized there by his creditors” (Petrie, 1999, p. 23). Because of this, Britain’s and France’s plunder contract prohibitions had a muted effect on foreign privateers’ ability to enforce the terms of their bargains with British and French merchantmen. But they did have some effect—namely, in those cases in which repossession was insufficient to ensure contractual compliance. Some assaulted commercial vessels, such as Arctic whalers, had no occasion to ever dock at a foreign port where they could be

<sup>24</sup> On the ways in which pirates sought to overcome the informational asymmetry regarding their strength and identity vis-à-vis merchantmen in the 18th century see, Leeson (2010b).

seized on behalf of the privateer they were indebted to, rendering this enforcement mechanism useless (see, for instance, Petrie, 1999, pp. 23–24).

Although problems relating to asymmetric information and enforcement are responsible for why some Coasean plunder agreements were never negotiated, problems relating to the benefit of such agreements in certain cases, and the transaction cost of creating them in others, are likely the reasons most privateer–merchantman plunder agreements failed to get off the ground. A privateer confronted a tradeoff when deciding how to proceed with a captured merchantman. As our theory highlights, negotiating a plunder contract with a victim merchantman had value to the privateer because it could avoid certain costs of producing plunder by doing so. These costs resulted from the time and risk associated with going back and forth between sea and prize court, giving up men to form a prize crew, and carrying and providing for a captured merchantman's sailors.

However, several of these costs were minimized if the privateer was seizing its final prize for the expedition. Even a well-provisioned privateer couldn't plunder forever. Many privateers couldn't last longer than the time it took to seize a single prize, especially since many weren't full time plunderers but were employed in commerce instead. Since privateers had to return to port after seizing their final prize, the time and risk they hazarded in traveling home, and the men they sacrificed to form a prize crew, were costs they incurred whether they contracted with victim merchantmen or not. Only the cost of providing for the captured merchant crew's sailors could be avoided by negotiating such an agreement. In these cases the gains from a plunderer–victim Coasean bargain were small.

In March, 1815 Captain Matthews' Baltimore privateer, the *Ultor*, was cruising when Matthews heard from a passing American ship that the war was over (Garitee, 1977, p. 155). The *Ultor* could plunder vessels on its way back to Baltimore. But it couldn't resume plundering after that. Since the victims the *Ultor* encountered on its way home at war's end would be its last, the privateer couldn't save time that could be spent plundering, travel costs of going back to port, or avoid the dangers of venturing to a prize court with its prizes by entering plunder contracts with these victims. So Matthews plundered the foreign merchantmen he encountered on his return home in the tradition fashion: without a Coasean contract.

In addition to the smallness of privateers' potential gains of using plunder contracts in some cases, the transaction costs of negotiating plunder agreements could be large. Above we discussed how high transaction costs of negotiating Coasean agreements prevented privateers and merchantmen from using such agreements to reduce the cost of defensive investments by merchantmen. In some cases high transaction costs also precluded Coasean contracts that could reduce the cost of producing plunder and the deadweight loss of destruction.

Recall the bargaining problem created by the bilateral monopoly situation that privateers and victim merchantmen confronted. The market for vessels and cargoes that merchantmen carried helped narrow privateers' and merchantmen's bargaining range, reducing these costs. But in other cases the vessel and cargo were worth little. In these situations the majority of the price a privateer could extract from its victim merchantman was based on the value the merchant crewmembers attached to their freedom. Here there was no market to narrow the bargaining window. The transaction costs of negotiation in these cases threatened to be large—large enough to trump the potential gains from plunderer–victim exchange, in particular if such gains were small in the first place because the privateer was heading home anyway. Indeed when a captured vessel and cargo were worth little, even traditional plunder could be more costly than it was worth, leading the captor to simply release its victim. When the *Yankee* overwhelmed the British schooner *Ceres*, the privateersmen were disappointed to find she was carrying only produce. "As this vessel was of little value she was released after some articles of value to her captors had been taken out" (Maclay, 1900, p. 271; see also, p. 272).

## 5. Concluding remarks

Our analysis has focused on the efficiency enhancing aspects of Coasean plunder contracts from a static, partial equilibrium perspective. A dynamic, general equilibrium perspective must account for the fact that in making privateer plunder more efficient, Coasean plunder contracts also contributed to more privateer attacks. Precisely because plunder agreements reduce the private, and thus social, costs of plundering, they encourage additional plunder.<sup>25</sup> Such a perspective makes assessing the welfare effects of privateer–merchantman plunder agreements more difficult.

If the supply response of privateering to the higher profits that Coasean plunder contracts enabled was sufficiently great, the resulting increase in privateering activity could be large enough to trump the static efficiency gains those contracts created. Further, more privateering may elicit the expenditure of more naval and privateering resources from the enemy, adding to the dynamic social cost that Coasean plunder contracts create. On the other hand, if privateers' supply response was sufficiently muted, Coasean plunder contracts would have resulted in a welfare improvement even dynamically considered. It's unclear from the history of the privateering episode which of these situations prevailed. What is clear is that, even if we assume the best case for Coasean plunder contracts' ability to improve welfare, the overall welfare improvement these contracts could have contributed to is small. This is true because, if for no other reason, the majority of privateer–merchantman

<sup>25</sup> For a contemporary version of this problem, consider the commercial ship ransoming that takes place off the east coast of Africa after Somali pirates capture these ships. Individual shipping firms have an interest in paying ransom for their ships. But from a global viewpoint this practice encourages the expansion of piracy in the region in addition to necessitating the cost of bringing more warships from the west in the area and diverting some merchant traffic through the longer routes around the cape of Good Hope. On the economics of piracy, old and modern, see Leeson (2009b).

interactions proceeded via traditional plunder rather than via the more efficient variety. Coasean plunder contracts were the minority in the age of privateering, not the rule. Thus, even in the best case, they managed to create only small efficiency gains relative to all those that were available given the number of privateer–merchantman encounters. The data considered above suggest that, at most, somewhere on the order of only 15–30 percent of all merchantman plunders were conducted via Coasean bargains.

Still, even the relatively small share of more efficient plunders our analysis identifies in the privateering era suggests that Coase's (1960) seminal insight has greater applicability than is usually thought. Even in situations in which property rights are poorly defined and interactions are coercive, the essence of the Coase theorem is at work. The plunderer's superior strength "naturally" endows him with property rights to his victim. However, this doesn't mean the plunderer necessarily comes to own everything in his victim's possession. When the victim's possessions are costly for the plunderer to appropriate, room for mutually beneficial exchange emerges.

In 18th- and 19th-century maritime marauding, plundering merchantmen was costly for privateers. To reduce these costs some privateers entered plunder contracts with their victims. Plunder contracts benefited them and merchantmen, which escaped having paid less for their release than they were worth to their owners and crews. Coasean bargaining in the context of coercion improved both parties' situation compared to if such bargains had been impossible.

Further, our analysis suggests that even if the Hobbesian view is correct in positing that in the absence of an overarching formal authority agents will be locked into a state of war with another, the conventional welfare implications of this view may be mistaken. It's impossible to reduce plunder's social cost to zero, making a world with plunder necessarily worse than one without it. However, economists have overstated at least the static social cost of plunder because they have overlooked plunderers' incentive to engage in activities that minimize plunder's social cost.

Plunder's social cost consists of private costs borne partly by plunderers: resources used to produce plunder, resources used to prevent/defend against plunder, and resources destroyed in conflict. By entering plunder contracts with their victims, plunderers can economize on the first and last of these costs. This benefits them and reduces plunder's social inefficiency. The incentive to create such agreements bounds how destructive even a world in which the strong are committed to plundering the weak can become. In the 18th and 19th centuries, plundering privateers and their victim merchantmen negotiated ransom bills that were to their mutual benefit and limited the social destructiveness of maritime marauding.

Finally, our paper highlights that although it may be difficult in many cases to satisfy the conditions required for Coasean plunder contracts and thus more efficient plunder, satisfying these conditions isn't impossible, even for parties at war with one another. Transaction costs, enforcement difficulties, and informational asymmetries threaten to frustrate such contracts. But for this very reason the parties to plunder have an incentive to seek ways of overcoming these obstacles to plunder agreements.

They don't always succeed in doing so. Privateers and merchantmen were unable to overcome the transaction costs of negotiating contracts whereby merchantmen would agree to forego investing in defensive measures that could prevent some privateer plunder. Thus this source of plunder's social cost remained unmitigated. But in other cases parties to plunder do manage to find solutions to obstacles that would otherwise stand in the way of their ability to realize gains from forging Coasean bargains—sometimes where it's least expected. Privateers developed a system of hostage taking to promote contractual enforcement. They relied on market prices for vessels and cargo when negotiating ransom bills to reduce transaction costs. And they created plunder contract templates in foreign languages to overcome communication barriers that threatened to prevent them from forging mutually beneficial plunder agreements. These efforts promoted their private gain. They also promoted more efficient plunder.

## References

- Anderson, G.M., Gifford Jr., A., 1991. Privateering and the private production of naval power. *Cato Journal* 11, 99–122.
- Anderson, G.M., Gifford Jr., A., 1995. Order out of anarchy: the international law of war. *Cato Journal* 15, 25–38.
- Anderson, T.L., Hill, P.J., 1975. The evolution of property rights: a study of the American West. *Journal of Law and Economics* 18, 163–179.
- Anderson, T.L., Hill, P.J., 2004. *The Not So Wild Wild West*. Stanford University Press, Stanford.
- Anderson, T.L., McChesney, F.S., 1994. Raid or trade? An economic model of Indian-white relations. *Journal of Law and Economics* 37, 39–74.
- Anderson, T.L., Benson, B.L., Flanagan, T.E., 2006. *Self-Determination: The Other Path for Native Americans*. Stanford University Press, Stanford.
- Becker, G.S., 1983. A theory of competition among pressure groups for political influence. *Quarterly Journal of Economics* 98, 371–400.
- Becker, G.S., 1985. Public policies, pressure groups, and dead weight costs. *Journal of Public Economics* 28, 329–347.
- Benson, B.L., 1989. The spontaneous evolution of commercial law. *Southern Economic Journal* 55, 644–661.
- Benson, B.L., 1990. *The Enterprise of Law: Justice without the State*. Pacific Research Institute, San Francisco.
- Bromley, J.S., 1987. *Corsairs and Navies 1660–1760*. The Hambledon Press, London.
- Buchanan, J.M., 1975. *The Limits of Liberty: Between Anarchy and Leviathan*. University of Chicago Press, Chicago.
- Bush, W.C., Mayer, L.S., 1974. Some implications of anarchy for the distribution of property rights. *Journal of Economic Theory* 8, 401–412.
- Coase, R.H., 1960. The problem of social cost. *Journal of Law and Economics* 3, 1–44.
- Coggeshall, G., 1856. *A History of American Privateers and Letters of Marque*. By and for the author, New York.
- Coggins, J., 2002. *Ships and Seamen of the American Revolution*. Dover, New York.
- Crowhurst, P., 1977. *The Defence of British Trade 1689–1815*. Dawson, Chatham, UK.
- Crowhurst, P., 1989. *The French War on Trade: Privateering 1793–1815*. Scholar Press, Aldershot, UK.
- Crowhurst, P., 1997. Experience, skill and luck: French privateering expeditions 1792–1815. In: Starkey, D.J., van Eyck van Heslinga, E.S., de Moor, J.A. (Eds.), *Pirates and Privateers: New Perspectives on the War on Trade in the Eighteenth and Nineteenth Centuries*. University of Exeter Press, Exeter, pp. 155–170.
- Dixit, A.K., 2004. *Lawlessness and Economics: Alternative Modes of Governance*. Princeton University Press, Princeton.
- Ellickson, R.C., 1991. *Order without Law: How Neighbors Settle Disputes*. Harvard University Press, Cambridge.

- Fanning, Nathaniel, 1912. *Fanning's Narrative, Being the Memoirs of Nathaniel Fanning, an Officer of the Revolutionary Navy, 1778–1783*. Naval History Society, New York.
- Frey, B.S., Buhofer, H., 1988. Prisoners and property rights. *Journal of Law and Economics* 31, 19–46.
- Friedman, D., 1979. Private creation and enforcement of law: a historical case. *Journal of Legal Studies* 8, 399–415.
- Garitee, J.R., 1977. *The Republic's Private Navy*. Mystic Seaport/Wesleyan University Press, Middletown, CT.
- Haddock, D., 2003. Force, threat, negotiation: the private enforcement of rights. In: Anderson, T.L., McChesney, F.S. (Eds.), *Property Rights: Cooperation, Conflict, and Law*. Princeton University Press, Princeton, pp. 168–194.
- Hirshleifer, J., 1995. Anarchy and its breakdown. *Journal of Political Economy* 103, 26–52.
- Hirshleifer, J., 2001. *The Dark Side of the Force: Economic Foundations of Conflict Theory*. Cambridge University Press, Cambridge, UK.
- Jameson, J.F. (Ed.), 1923. *Privateering and Piracy in the Colonial Period*. Augustus M. Kelley, New York.
- Landa, J.T., 1981. A theory of the ethnically homogeneous middleman group: an institutional alternative to contract law. *Journal of Legal Studies* 10, 349–362.
- Landa, J.T., 1994. Trust, Ethnicity, and Identity: Beyond the New Institutional Economics of Ethnic Trading Networks, *Contract Law and Gift Exchange*. University of Michigan Press, Ann Arbor.
- Leeson, P.T., 2007a. An-*arrgh*-chy: the law and economics of pirate organization. *Journal of Political Economy* 115, 1049–1094.
- Leeson, P.T., 2007b. Trading with bandits. *Journal of Law and Economics* 50, 303–321.
- Leeson, P.T., 2008. Social distance and self-enforcing exchange. *Journal of Legal Studies* 37, 161–188.
- Leeson, P.T., 2009a. The laws of lawlessness. *Journal of Legal Studies* 38, 471–503.
- Leeson, P.T., 2009b. *The Invisible Hook: The Hidden Economics of Pirates*. Princeton University Press, Princeton.
- Leeson, P.T., 2010a. Rational choice, round robin, and rebellion: an institutional solution to the problems of revolution. *Journal of Economic Behavior and Organization* 73, 297–307.
- Leeson, P.T., 2010b. *Pirational Choice: the economics of infamous pirate practices*. *Journal of Economic Behavior and Organization* 76, 497–510.
- Leeson, P.T., Boettke, P.J., 2009. Two-tiered entrepreneurship and economic development. *International Review of Law and Economics* 29, 252–259.
- Libecap, G.D., 2003. Contracting for property rights. In: Anderson, T.L., McChesney, F.S. (Eds.), *Property Rights: Cooperation, Conflict, and Law*. Princeton University Press, Princeton, pp. 142–167.
- Lydon, J.G., 1970. *Pirates, Privateers and Profits*. Gregg Press, Upper Saddle River, NJ.
- Maclay, E.S., 1900. *A History of American Privateers*. Sampson Low Marsten & Co, London.
- Marsden R.G., 1915–1916 (1999). *Law and Custom of the Sea*, vol. 2. Lawbook Exchange, Union, NJ.
- Martens, G.F., Horne, T.H., 1801. *An Essay on Privateers, Captures, and Particularly on Recaptures, According to the Laws, Treaties and Usages of the Maritime Powers of Europe*. Printed for E. and R. Brooke, London.
- Morgan, K., 1989. Shipping patterns and the Atlantic trade of Bristol, 1749–1170. *William and Mary Quarterly* 46, 506–538.
- Petrie, D.A., 1999. *The Prize Game: Lawful Looting on the High Seas in the Days of Fighting Sail*. Berkley Books, New York.
- Powell, B., Stringham, E.P., 2009. Public choice and the economic analysis of Anarchy: a survey. *Public Choice* 140, 503–538.
- Powell, B., Wilson, B.J., 2008. An experimental investigation of Hobbesian jungles. *Journal of Economic Behavior and Organization* 66, 669–686.
- Rajan, R.G., Zingales, L., 1998. Power in a theory of the firm. *Quarterly Journal of Economics* 113, 387–432.
- Roscoe, E.S. (Ed.), 1905. *Reports of Prize Cases Determined in the High Court of Admiralty*. Stevens and Sons, London.
- Sechrest, L.J., 2004. Public goods and private solutions in maritime history. *Quarterly Journal of Austrian Economics* 7, 3–27.
- Senior, W., 1918. Ransom bills. *Law Quarterly Review* 34, 49–62.
- Skaperdas, S., 1992. Cooperation, conflict and power in the absence of property rights. *American Economic Review* 82, 720–739.
- Skaperdas, S., 2003. Restraining the genuine homo economicus: why the economy cannot be divorced from its governance. *Economics and Politics* 15, 135–162.
- Starkey, D.J., 1990. *British Privateering Enterprise in the Eighteenth Century*. University of Exeter Press, Exeter.
- Starkey, D.J., 1997. A restless spirit: British privateering enterprise 1739–1815. In: Starkey, D.J., van Eyck van Heslinga, E.S., de Moor, J.A. (Eds.), *Pirates and Privateers: New Perspectives on the War on Trade in the Eighteenth and Nineteenth Centuries*. University of Exeter Press, Exeter, pp. 126–140.
- Starkey, D.J., 2001. The origins and regulation of eighteenth-century British privateering. In: Pennell, C.R. (Ed.), *Bandits at Sea: A Pirates Reader*. New York University Press, New York, pp. 69–81.
- Stringham, E.P., 2003. The extralegal development of securities trading in seventeenth-century Amsterdam. *Quarterly Review of Economics and Finance* 43, 321–344.
- Stringham, E.P. (Ed.), 2007. *Anarchy and the Law: The Political Economy of Choice*. Transaction Publishers, Somerset, NJ.
- Swanson, C.E., 1991. *Predators and Prizes: American Privateering and Imperial Warfare, 1739–1748*. University of South Carolina Press, Columbia, SC.
- Tabarrok, A., 2007. The rise, fall, and rise again of privateers. *Independent Review* 11, 565–577.
- Tullock, G., 1967. The welfare costs of monopolies, tariffs, and theft. *Western Economic Journal* 5, 224–232.
- Umbeck, J., 1981. Might makes rights: a theory of the formation and initial distribution of property rights. *Economic Inquiry* 19, 38–59.
- Upton, F.H., 1863. *The Law of Nations Affecting Commerce During War: With a Review of the Jurisdiction*. In: *Practice and Proceedings of Prize Courts*. John S. Voorhies, New York.
- Wheaton, H., 1815. *A Digest of the Law of Maritime Captures and Prizes*. Forbes & Co, New York.
- Williamson, O.E., 1983. Credible commitments: using hostages to support exchange. *American Economic Review* 73, 519–540.
- Wright, C., Fayle, C.E., 1928. *A History of Lloyd's*. Macmillan, London.