

The calculus of piratical consent: the myth of the myth of social contract

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Abstract Is a genuine social contract mythical? I argue that pirates created genuine social contracts that established a system of constitutional democracy based on the same decision-making calculus and with the same effects that Buchanan and Tullock’s contractarian theory of government describes in *The Calculus of Consent*. Pirates’ constitutional democracy is the “holy grail” of social contract theory. It demonstrates that the contractarian basis of constitutional democracy is more than a mere analytic device or hypothetical explanation of how such a government could emerge. In pirates’ case, Buchanan and Tullock’s social contract theory describes how constitutional democracy actually did emerge.

Keywords Pirates · Social contract · Calculus of consent · Constitutional democracy

1 Introduction

Everyone knows that a genuine social contract—a written, unanimous agreement created by individuals in the state of nature with the express purpose of establishing political authority—is myth. We learn the work of Thomas Hobbes (1651), John Locke (1690), and Jean-Jacques Rousseau (1761), and at the same time learn that no society ever actually created its government through social agreement. As Emile Durkheim (1933: 202) put it, “The conception of a social contract . . . has no relation to the facts . . . Not only are there no societies which have such an origin, but there is none whose structure presents the least trace of contractual organization.” Thus, in contemporary contractarian scholarship, the social contract is used exclusively as an analytic device to conceptually understand the reasons for

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government, discuss its substance, and evaluate its legitimacy (see, for instance, Rawls 1971; Buchanan and Tullock 1962; Buchanan 1975). According to William Riker and Itai Sened (1991: 952), for example, “Despite the analytical value of [social contract] theories for the study of the consequences of rights or their normative value to justify enforcement, they are manifestly incorrect as descriptions of events.” Since obviously no society ever had one, “Contemporary contractarians do not argue for the historical reality of a primordial social contract” (Heckathorn and Maser 1987: 144).

But maybe they should. Consider the following:

- I. *Every Man has a Vote in the Affairs of Moment; has equal Title to the fresh Provisions, or strong Liquors, at any Time seized, and may use them at Pleasure, unless a Scarcity make it necessary, for the Good of all, to vote a Retrenchment.*
- II. *Every Man to be called fairly in Turn, by List, on board of Prizes, because, (over and above their proper Share) they were on these Occasions allowed a Shift of Cloaths: But if they defrauded the Company to the Value of a Dollar, in Plate, Jewels, or Money, Marooning was their Punishment. If the Robbery was only betwixt one another, they contented themselves with slitting the Ears and Nose of him that was Guilty, and set him on Shore, not in an uninhabited Place, but somewhere, where he was sure to encounter Hardships.*
- III. *No person to Game at Cards or Dice for Money.*
- IV. *The Lights and Candles to be put out at eight a-Clock at Night: If any of the Crew, after that Hour, still remained enclined for Drinking, they were to do it on the open Deck.*
- V. *To keep their Piece, Pistols, and Cutlash clean, and fit for Service.*
- VI. *No Boy or Woman to be allowed amongst them. If any Man were found seducing any of the latter Sex, and carry'd her to Sea, disguised, he was to suffer Death.*
- VII. *To Desert the Ship, or their Quarters in Battle, was punished with Death or Marooning.*
- VIII. *No striking one another on board, but every Man's Quarrels to be ended on Shore, at Sword and Pistol.*
- IX. *No Man to talk of breaking up their Way of Living, till each shared a 1000 l. If in order to this, any Man should lose a Limb, or become a Cripple in their Service, he was to have 800 Dollars, out of the public Stock, and for lesser Hurts, proportionately.*
- X. *The Captain and Quarter-Master to receive two Shares of a Prize; the Master, Boatswain, and Gunner, one Share and a half, and other Officers one and a Quarter.*
- XI. *The Musicians to have Rest on the Sabbath Day, but the other six Days and Nights, none without special Favour.*

This is an actual written agreement, consented to by every member of the society it governed. The members of this society existed in a genuine state of nature before the agreement, which they explicitly created to exit the Hobbesian Jungle, establish political authority, and facilitate social cooperation. “[F]inding hitherto they had been but as a Rope of Sand, they formed [this] set of Articles, to be signed and sworn to, for the better Conservation of their Society, and doing Justice to one another” (Johnson 1726–1728: 210–212). This is a genuine social contract; its creators were early 18th-century pirates who lived and worked under the democratically established political leadership of Captain Bartholomew Roberts.

To count as a genuine social contract, a contract must satisfy three criteria: 1. It must be a written agreement between society's members explicitly for the purpose of establishing political authority to facilitate social cooperation. A contract between parties for the

exchange of shoe leather, for instance, is a contract, but is not a *social* contract because its purpose isn't to create government. 2. It must bring the contracting members of society out of a state of nature—a situation in which there exists no political authority they can appeal to—to prevent conflict and facilitate social cooperation. If individuals create an agreement that is both recognized and enforceable by an existing government, we have a contract, but not a social contract. 3. Every member of society the contract covers must voluntarily enter into and agree to be bound by this contract. That is, society's members must explicitly and unanimously consent to the contract. Anything short of unanimous consent means the social contract is not in fact a genuine contract—the product of voluntary agreement. Alleged products of “conceptual unanimity,” “tacit consent,” and so forth, which contractarians often invoke to skirt the logistical difficulties involved with, or historical absence of, fully and explicitly consensual social agreements therefore do not count.¹ The United States Constitution, for instance, which some individuals signed and explicitly consented to, but most individuals did not—and certainly none who are alive today—does not constitute a genuine social contract.² If it did, we would not say that a genuine, historical social contract is myth. Note that requiring the explicit consent of every member of society *to whom a social contract will apply* to qualify it as genuine and legitimate is not the same as requiring the consent of every person to whom the contract might or could apply. As Rousseau (1761: Book IV, Chap. ii) put it, “If . . . there are opponents when the social compact is made, their opposition does not invalidate the contract, but merely prevents them from being included in it. They are foreigners among citizens.” Non-signers aren't bound by the social contract; but neither may they enjoy its benefits. A contract that satisfies all three of these criteria is a social contract in the strictest sense. It is this social contract that supposedly never founded any society's government.

This paper argues that the myth of social contract is a myth. Early 18th-century pirate societies founded government through written, unanimous social contracts, such as the one recounted above, which they created in a state of nature expressly for the purpose of establishing political authority. Pirates' social contracts created a system of constitutional democracy based on the same decision-making calculus and with the same effects that James Buchanan and Gordon Tullock's (1962) contractarian theory of government describes in *The Calculus of Consent*. Pirates' constitutional democracy is the “holy grail” of social contract theory. It demonstrates that the contractarian basis of constitutional democracy is more than a mere analytic device or hypothetical explanation of how such a government could emerge. At least in the case of some pirates, Buchanan and Tullock's social contract theory describes how constitutional democracy actually did emerge.³

In fact, as I discuss below, in one very important sense, pirates' social contracts were “more genuine” than those forged in Buchanan and Tullock's theoretical world. As noted

¹ On the centrality of unanimity to the contractarian approach, see Vanberg (1994, 2005).

² Rhode Island did not even send a delegate to the Constitutional Convention.

³ In Buchanan and Tullock (1962) individuals are assumed to negotiate the social contract behind a “veil of uncertainty” (similar to John Rawls' (1971) “veil of ignorance”) where they do not know what their position will be vis-à-vis others in the post-constitutional stage and therefore bargain from equal positions of power. In his follow-up work, *The Limits of Liberty*, Buchanan (1975) relaxes this assumption and allows individuals to negotiate the social contract from positions of unequal bargaining power. For my analysis this distinction is unimportant. My analysis is not concerned with *where* along the contract curve in the “political gains from exchange” Edgeworth box parties actually end up (which is influenced by whether we assume a “veil of uncertainty” or not). Rather, my interest, central to both Buchanan and Tullock (1962) and Buchanan (1975), is the *existence* of a contract curve representing the set of Pareto optimal “political exchanges” that can be made from the state of nature for pirates, and *whether/how* pirates were able to realize the mutual gains from such an exchange and arrive at a point on this contract curve if one in fact existed.

above, a true social contract must be consented to unanimously by the individuals it governs. However, to avoid difficulties with the unanimity principle in practice, *The Calculus of Consent* ultimately abandons this principle and invokes the notion of “conceptual unanimity”—which, despite its name, involves less than unanimity—instead. The difficulty, of course, is that without actual unanimity we no longer have the calculus of *consent*; we have the calculus of *compulsion*. The foundation of government then becomes something akin to McGuire and Olson’s (1996) “stationary bandit” model, which is quite the opposite of the contractarian foundation Buchanan and Tullock want to advance.

Economist Murray Rothbard (1997), and before him the great 19th-century legal theorist Lysander Spooner (1870), emphasized the centrality of actual unanimity to the legitimacy and genuineness of a literal social *contract*. What distinguishes a contractual relationship from a coercive, and thus criminal, one is that only the former involves the voluntary consent of all those to whom the terms of the relationship apply. Without such consent the relationship is involuntary for at least one person and thus cannot meaningfully be considered contractual. Rothbard (1997), Yeager (1985, 1994), and Block and DiLorenzo (2000) thus rightly criticize Buchanan and Tullock (1962) for invoking “conceptual unanimity” in developing their theory of constitutional democracy’s emergence.

But in criticizing Buchanan and Tullock on this count, we mustn’t throw the baby out with the bath water. The unfortunate substitution of “conceptual unanimity” for actual unanimity in their framework doesn’t mean their account isn’t without great value and tremendous insight. In particular, the specific reasons individuals in the state of nature may seek to forge an agreement to bring them out of that state, which Buchanan and Tullock identify, as well as the necessity of balancing what Buchanan and Tullock call the “total interdependence costs” of social decision making and identifying how particular factors influence this process for particular kinds of social decisions, provide invaluable insight into the economics of social contract creation. What’s more, these critical insights stem from Buchanan and Tullock’s particular contractarian approach and remain valid despite their important misstep when it comes to substituting “conceptual unanimity” for the genuine variety.

In short, the criticism of Buchanan and Tullock’s contractarian theory of social order explicit in Rothbard (1997) and others, and implicit in Spooner (1870), who wrote long before Buchanan and Tullock put pen to paper, can be correct without invalidating, or minimizing the importance of, Buchanan and Tullock’s insights stemming from this theory. As my analysis discusses, these insights, for example, are crucial for understanding the emergence of pirate societies’ social order—a social order that, as I consider below, was for many pirate societies based on genuine unanimity and therefore literal social contract. Thus Buchanan and Tullock’s contractarian theory of governance in *The Calculus of Consent* proves its importance for illuminating genuine social contracts rooted in actual unanimity, even though, as Rothbard (1997) and others correctly point out, they develop their theory in the context of illegitimate, or rather “non-contractual,” “social contracts” rooted in conceptual (and thus less than) unanimity.

To examine the calculus of piratical consent my investigation draws on the most important primary source historical documents relating to pirates. The first of these is Captain Charles Johnson’s *General History of the Pyrates* (1726–1728), which contains reports on a number of history’s most famous pirates related by a pirate contemporary.⁴ I also consider

⁴“Captain Johnson” is a pen name used by the author of *A General History of the Pyrates*. His true identity remains unknown. In 1932 John R. Moore claimed Johnson was in fact Daniel Defoe. In the late 1980s, however, this view was overturned (see, Furbank and Owens 1988) and today many pirate historians do not believe Defoe is the author of this important book (see for instance, Cordingly 2006; Rediker 2004; Woodard

Alexander Exquemelin's (1678) invaluable account of those 17th-century proto-pirates the buccaneers.⁵ Exquemelin was himself a buccaneer and provides a detailed firsthand account of their social contracts. In addition to these sources I draw on court records from pirate trials, 18th-century newspaper accounts of pirates, archival records from the High Court of Admiralty (HCA) papers relating to piracy, and the writings of pirate prisoners, such as William Snelgrave (1734[1971]), which shed light on the pirates' system of constitutional democracy.⁶

2 The reason of pirate rules

According to Buchanan and Tullock (1962), and later Buchanan (1975), there are three primary reasons society's members will establish government contractually: 1. to protect themselves against violent encroachments by other members of society (the "protective state"); 2. to prevent negative externalities and produce "public goods" (besides protection), which a central authority can more efficiently provide than individual action (the "productive state"); and 3. to check rulers endowed with the authority to provide protection and produce public goods from using this authority for predatory purposes (to check the "predatory state").

Although pirates were criminals, they had the same need for peace, public goods, and constraints on authorities' power as legitimate societies do. The reason for this is simple enough. Pirates lived and worked together in societies that required their members' cooperation for individuals to achieve their goal: profit through coordinated plunder (Leeson 2008a). To successfully plunder merchant ships, individual pirates had to coordinate the activities of their ship's crews. The typical pirate crew was between 80 and 250 sailors strong; though several crews were larger than this and a few were smaller (Rediker 1987; Cordingly 2006; Leeson 2007). Pirate ships carried such large crews to maximize plunder potential. An average 200-ton merchant ship in the early 18th century carried fewer than 20 men (Rediker 1987). With four times as many on board, the average pirate ship was well positioned to operate the many more guns it carried and to overwhelm most merchant ships by boarding if needed.

No pirate ships carried only a single sailor. A one-man pirate "crew" wouldn't have been large enough to sail a small ship, let alone overtake prey. Piracy, then, was necessarily a cooperative enterprise involving dozens, and in some cases hundreds, of individual sailors. The men who composed a pirate crew made up pirates' "floating societies." They lived and worked together for long periods of time at sea. Pirates had some land bases, such as the one at New Providence that Woodes Rogers went to squelch in 1718, to which they retired between marauding expeditions. But they spent most of their time—and certainly their most

2007; for the opposing view see, Rogozinski 2000). Whatever Johnson's true identity, it is agreed that he "had extensive first-hand knowledge of piracy" (Konstam 2007: 12). While it is acknowledged that Johnson's work contains some errors and apocryphal accounts (such as the community of Libertalia), "Johnson is widely regarded as a highly reliable source for factual information" on pirates (Rediker 2004: 180) and remains a definitive source historians rely on in constructing their accounts of late 17th- and early 18th-century piracy. As eminent pirate historian David Cordingly put it, this book "is the prime source for the lives of many pirates of what is often called the Golden Age of Piracy" (2006: xx).

⁵Buccaneers differ from 'pure' pirates in that they sometimes, though not always, plundered ships with government sanction. Buccaneers are late 17th-century predecessors of the total outlaw pirates of the early 18th century, which this paper is primarily concerned with. I discuss buccaneers when and where their influence on and connection to pure pirates' social contracts is important.

⁶Unless otherwise noted, all newspaper accounts are reprinted in Baer (2007: vol. 1).

important time—in close quarters among fellow rogues on their ships prowling the ocean. Pirate contemporary and chronicler Captain Charles Johnson called the community of pirates “that abominable Society” (1726–1728: 114). He may have been right; but it was a society nonetheless and thus, to be successful, required a social contract that could satisfy the three features Buchanan and Tullock (1962) identified.

2.1 Piratical demand for the “protective state”

Pirates were outlaws. Government branded them *hostes humani generis*—enemies of all mankind—and denied pirates the protections and rights enjoyed by “legitimate” citizens. As one British colonial official put it, a pirate “can claim the Protection of no Prince, the privilege of no Country, the benefit of no Law; He is denied common humanity, and the very rights of Nature, with whom no Faith, Promise nor Oath is to be observed, nor is he to be otherwise dealt with, than a wild & savage Beast, which every Man may lawfully destroy” (The trials of eight persons indited for piracy &c . . . 1718, p. 6). Pirates, then, couldn’t appeal to any political authority to protect them, let alone protect them against one another. As a result, they existed in a genuine state of nature vis-à-vis one another. And yet, pirates’ need for “protective state” functions was at least as pronounced, and probably more so, than legitimate citizens’ need for such functions. After all, pirates were criminals, and violent thieving criminals at that. Between pirates and legitimate citizens, then, pirates’ dispositions were more demanding of rules and regulations for creating peace and cooperation than were those of generally more peaceable and honest “regular” citizens.

To band together for coordinated plunder successfully, pirates needed to ensure violence, theft, and other kinds of inter-crew conflict would not destroy their ability to cooperate. If pirates’ plunderous dispositions extended to their interactions with one another, they could not realize the benefits of mutual cooperation and their society would fall apart. The need for a piratical “disarmament contract” was further heightened by the fact that pirates’ social environment—ships—were especially sensitive to many kinds of potential inter-crewmember conflict. Like all early 18th-century sea vessels, pirate ships were built of wood (the hull) and cloth (the sails). A violent dispute between two pirates that ended in clashing cutlasses or gunfire therefore threatened to damage the ship by puncture or fire. There was also little room for crewmembers not involved in such conflict to take cover if a violent brawl broke out between others. In these ways conflict in pirate society tended to generate more significant negative externalities than inter-personal conflict in other societies—externalities sufficient to quite literally tear pirate society apart if they couldn’t be controlled.

2.2 Piratical demand for the “productive state”

The negative externalities generated by violent conflicts between pirate crewmembers weren’t the only negative externalities that threatened to undo pirate society, however. The tight and cramped nature of life at sea made several behaviors that would not generate negative externalities under “normal” circumstances prone to producing negative spillovers for others on pirate ships. In landed societies, where there is much more room, the drinking habits of others inside their homes, for example, do not impose significant costs on those who live near them. For the most part, the costs of, say, a neighbor’s drunken stupor, are contained within the walls of his home. But on a pirate ship things could be different. All members of a pirate crew lived in the same house, so to speak. A pirate’s drunken stupor, then, could interfere with others, for instance those who were trying to sleep. Other kinds of negative externalities on pirate ships could destroy the vessel. For example, if a pirate

smoker dumped his pipe carelessly on the ship, it could ignite the large quantity of gunpowder the vessel was carrying, blowing the crew to pieces.

Closely related to the importance of preventing negative externalities in pirate society was the importance of providing for piratical public goods. Specifically, pirates needed to provide for full pirate crew effort. The reason full crew effort was a public good is straightforward. Under the pirates' default compensation scheme, ordinary crewmembers shared the benefits of successful plunder equally. These benefits were largely non-excludable. With somewhat unlikely exceptions, it was not possible for pirates engaged in a violent deck fight with target merchant sailors, for example, to monitor their comrades' effort. If shirking was egregious this might be possible. But staying back a bit in a fight, or avoiding more difficult adversaries if it came to clashing cutlasses, would not have been easy to detect, especially when the other crewmembers were preoccupied with avoiding their victims' swords themselves. Since a pirate crew's success did not critically hinge on the full effort of any individual pirate, a pirate who exerted less than full effort incurred no cost of shirking in a fight. On the other hand, if he exerted full effort, he put himself at a greater risk of being injured—a cost that was borne more-or-less privately. These factors gave crewmembers an incentive to exert less than full effort. But of course, if every pirate shirked in battle, the crew would be unlikely to succeed, leading to less or no plunder for everyone. To prevent this situation from undermining their criminal enterprise, pirates therefore needed some way to provide for this public good and prevent pirate free riding.

2.3 Piratical demand for constraints on the “predatory state”

Like all societies, pirates also required “leaders”—individuals with authority to perform important functions, such as the “protective” and “productive” functions discussed above. Further, since pirate ships were belligerent vessels, they also required leaders who could command authority in “military” affairs. As noted above, piracy was a dangerous business based on the prospect of violent conflict with victim merchant ships. Battle-related decisions, such as how to proceed in the midst of conflict, when to run, and so forth, required snap decision making and authoritarian directive. A “leader” with the power to make such decisions on behalf of the whole was therefore indispensable.

As I discuss below, to provide such social leadership pirates created the offices of captain and quartermaster in their crews. The need for these leaders created a dilemma for pirates, however. Officers endowed with such authority were also strong enough to abuse it, turning their power against the pirate crew for personal benefit. This possibility was especially vivid in pirates' minds since most had formerly sailed in the employ of merchant ships where, as Marcus Rediker (1987) points out, they suffered under predatory officers who cheated, beat, and in other ways abused their autocratic authority to take advantage of them. If pirates couldn't prevent “ruler” predation, their ability to provide the “protective” and “productive” functions discussed above was meaningless. Even if crewmembers succeeded in protecting themselves against one another's aggression, protecting themselves against negative externalities, and soliciting one another's full effort, as long as pirate officers could abuse them with impunity, pirates stood to lose rather than gain from combining for criminal profit. Pirates' ability to combine for mutual benefit consequently depended upon their ability to restrain leader predation.

3 Pirates' constitutional contracts

Pirate constitutions can be traced back to the “articles of agreement” that governed buccaneer crews in the 17th century, which buccaneers called a “*chasse-partie*.” Buccaneer articles

focused primarily on how crewmembers would divide the proceeds of their marauding expeditions. However, these articles operated within a broader set of buccaneer meta-rules called the “Custom of the Coast,” or the “Jamaica Discipline,” which established democracy as a key form of social decision making, crewmembers carrying important decisions, such as where they would sail and in many cases who would lead them, by popular vote (see, Exquemelin 1678: 71–72).⁷

Eighteenth-century pirates who, unlike buccaneers, were total outlaws and therefore had the need for truly encompassing, self-made social order, extended the basic buccaneer framework to create full-blown social contracts, such as the one Bartholomew Roberts’ crew created, recounted in Sect. 1. Pirate social contracts received and required unanimous consent. When a pirating expedition was launched and thus a pirate society was “created,” every pirate who joined signed the social contract. The same was true for newcomers who joined pirate companies already under way. As one observer put it, “When ever any enter on board of these Ships voluntarily, they are obliged to sign all their Articles of Agreement” (Downing 1737: 107). Pirate captain Howell Davis’ crew’s articles, for instance, “were signed and sworn to by himself and the rest” (Johnson 1726–1728: 1677–1678). In pirate captain Worley’s crew, too, “they all signed Articles” (Johnson 1726–1728: 298). Similarly, when the pirates who sailed with Captain George Lowther decided to combine for their criminal purpose, “They one and all came into the Measures . . . Articles were drawn up, signed to and sworn upon the Bible” (Johnson 1726–1728: 307).

Notably, pirates’ social contracts did not confront the problem of successive generations that never agreed to, but were nonetheless bound by, their predecessors’ agreements, which David Hume (1748) first highlighted in his essay “Of the Original Contract.” The reason for this is straightforward: pirate constitutions expired when the crew that created and sailed under them retired its venture. Pirate constitutions therefore lasted only as long as the particular pirate societies that created them did. This could be anywhere between several weeks and several years, depending upon how long a crew remained together.⁸ Some piratical social contracts contained provisions requiring signatories to remain with the company until each man had earned a predetermined sum (see, for instance, Sect. IX of pirate captain Bartholomew Roberts’ crew’s constitution presented in Sect. 1). But the duration of particular pirate crews was never so long that it permitted successive generations of pirates to come into existence, creating the problem Hume identified. Further, with what appears to be only three exceptions, no 18th-century floating pirate society had women.⁹ Thus, in any event, the

⁷Pirate articles also shared some important similarities with privateer articles. Since many pirates had previously served on privateers, these articles also surely influenced pirate constitutions. However, pirate and privateer articles were not identical. Leeson (2007) discusses some of the similarities and differences. More generally, pirate constitutions can be seen as examples of privately created law. For other examples of this, see Benson (1989), Friedman (1979), and Leeson (2008c). For a discussion of contemporary private constitutions—those of condominium homeowner associations—in the context of Buchanan and Tullock’s theory, see Barzel and Sass (1990) and Sass (1992).

⁸There are several cases of severe disagreements, space constraints as a result of a growing crew, or other sources of potential conflict emerging while a particular crew was under sail, which led to crew ‘splintering.’ To prevent potential conflict from erupting into actual conflict in such cases the crew peacefully divided, some pirates staying with the original captain and ship, others going with a new captain in a prize ship to strike out on their own. In these cases the new crew created a new constitution for its particular pirates who now operated independently (Rediker 2004: 81). Captain Roberts’ crew created the articles recounted in Sect. 1 after crewmember Walter Kennedy sailed away with several others and the crew’s booty leading to the creation of a “new” crew.

⁹Though, numerous women inhabited the pirates’ chief 18th-century land base, the island of New Providence in the Bahamas.

prospect of successive generations coming into existence within a particular pirate crew was extremely slim.¹⁰

There is one potential obstacle for the claim that pirates consented to their constitutions unanimously, however. Some pirate crews conscripted sailors, especially the skilled variety, when they were at sea and lacked specialized labor inputs they required. The status of “forced men” on pirate ships varied. Some were compelled to sign the ship’s articles. Others were not compelled to do so but could not enjoy the perquisites of social membership, such as voting rights, until they did (Rediker 2004: 79–81). As Leeson (2008a, 2008b) points out, pirate conscription was relatively rare since forced men tended to upset the social harmony pirates’ private system of governance relied on and could be the undoing of a pirate company if they escaped or sabotaged their captors. But even the presence of conscripts in some pirate crews doesn’t undermine the unanimity underlying many pirate constitutions at their inception. Pirates typically created their social contracts when they first launched pirating expeditions. At this initial stage, pirate crews consisted entirely of volunteers. Even for a pirate crew that had its start in mutiny at sea, sailors permitted their colleagues who did not desire to go a-pirating to depart, leaving a unanimously consenting pirate crew to undertake its criminal business. Thus, although some pirate crews eventually conscripted some sailors, initially, at least, pirate crews were typically composed of volunteers who consented unanimously to the constitutions that governed them.

3.1 Preventing pirate conflict: the piratical “disarmament contract”

Pirate constitutions functioned as “disarmament contracts” by prohibiting the two major sources of potential social conflict that pirates confronted, theft and violence. Sections II and VIII of the articles on Roberts’ ship, for example, regulated theft and violence respectively (see articles recounted in Sect. 1). Sections II and V of pirate captain Edward Low’s company’s articles did the same, barring men to “to Strike or Abuse one another in any regard” or from “Defrauding one another to the Value of a Ryal of Plate” and required that “If any Gold, Jewels, Silver, &c. be found on Board any Prize or Prizes to the value of a Piece of Eight . . . the finder” had to “deliver it to the Quarter Master in the space of 24 hours” lest he be considered guilty of stealing from the crew (*Boston News-Letter*, August 1–August 8, Tryals of thirty-six persons for piracy . . . 1723).¹¹ Similarly, Sects. III and V of the articles governing pirate captain John Phillips’ *Revenge* declared it unlawful for “any Man . . . [to] steal any Thing in the Company . . . to the Value of a Piece of Eight” or to “strike another whilst these Articles are in force” (Johnson 1726–1728: 342–343).

To enforce the terms of the disarmament contract pirates agreed to, their constitutions created punishments for lawbreakers and provided means for enforcing these penalties. Such punishments included “keel-hauling,” which involved dragging the insolent pirate underneath the ship across the barnacled and sharp hull, marooning, which involved leaving a

¹⁰The most infamous co-ed pirate crew was captained by “Calico” Jack Rackam. One of the women who sailed in Rackam’s crew was Rackam’s lover, Anne Bonny. Allegedly, Rackam and Bonny conceived on the ship and Bonny gave birth in Cuba where she left the child. However, this child wasn’t permitted among the pirates. Even if it had been, since authorities captured Rackam’s pirates not long after Bonny gave birth, the intergeneration problem was moot.

¹¹Captain George Lowther’s crew’s articles, as reported by Johnson (1726–1728: 307–308), are nearly identical to those the *Boston News-Letter* and the *Tryals of Thirty-Six Persons for Piracy* attribute to Edward Low’s company. Since Lowther and Low sailed in consort for a time, it is possible, especially in light of the similarities between pirate crews’ articles more generally, that the closeness results from this. Alternatively, Johnson, the *Boston News-Letter*, or the *Tryals of thirty-six persons for piracy . . . (1723)* may have mistakenly attributed the articles to Low when they belonged to Lowther or vice versa.

lawbreaker on a deserted island, lashings and, for the most serious violations, death (see, for instance, A full and exact account, of the tryal of all the pyrates, lately taken by Captain Ogle ... 1723: 19, 48; Johnson 1726–1728: 211, 342–343).

Since pirates primarily created their articles as a body of meta-rules, their constitutions didn't fully specify punishments for rule violations. Nor were they intended to. Like all contracts, pirates' social contracts were costly to create. Enumerating every conceivable contingency and the appropriate social response would have been impossible, and the longer and more detailed the list of social rules pirates created, the higher the contracting cost pirates incurred. Thus their constitutions tended to be short and simple. To address issues their articles did not specify, sea dogs relied on a sort of "pirate council" that leveraged their democratic decision-making structure, which I discuss below: "[I]n Case any Doubt should arise concerning the Construction of these Laws, and it should remain a Dispute whether the Party had infringed them or no, a Jury was appointed to explain them, and bring in a Verdict upon the Case in Doubt" (Johnson 1726–1728: 213). Similarly, to deal with cases in which their constitutions did not specify the punishment for a particular infraction, pirate articles established a democratic mechanism for this purpose, stipulating that the wrongdoer "shall suffer what Punishment the Captain and Majority of the Company shall think fit" (*Boston News-Letter*, August 1–August 8, 1723). For more severe infractions crewmembers also often voted on punishments, "all the Pyrates Affairs being carried by that" (A full and exact account, of the tryal of all the pyrates, lately taken by Captain Ogle ... 1723: 27). As Richard Hawkins observed among his pirate captors, for instance, "If any one commits an Offence, he is try'd by the whole Company" (*British Journal*, August 22, 1724).

Although pirates relied on democratic decision making to adjudicate rules, resolve conflicts, and define punishments in exceptional cases, such as when their articles were unclear on these matters, their regular method of adjudicating disputes and enforcing punishments was to delegate these duties to an officer they specifically created and designated for this purpose, their democratically elected quartermasters. The quartermaster "act[ed] as a Sort of civil Magistrate on board a Pirate Ship" who mediated crewmember conflicts (Johnson 1726–1728: 213). When his mediation failed the quartermaster refereed a duel between the parties that took place on land so as not to destroy the ship. "The Quarter-Master of the Ship, when the Parties will not come to any Reconciliation, accompanies them on Shore with what Assistance he thinks proper, and turns the Disputants Back to Back, at so many paces Distance: At the Word of Command, they turn and fire immediately ... If both miss, they come to their Cutlashes, and then he is declared Victor who draws the first blood" (Johnson 1726–1728: 212; see also, 339).

Though far from perfect, pirate articles worked well in preventing internal conflict and creating order aboard pirate ships. Blackbeard famously wrecked the *Queen Anne's Revenge* and deserted part of its crew to increase the shareout for him and his favorite crewmembers. But cases such as this seem to have been exceptions to the pirates' tendency to obey their rules and remain honest in their dealings with their fellow rogues. As the editor of the 1699 edition of Exquemelin's pirate memoir described buccaneer society, for instance, "*it is very remarkable, that in such a lawless Body as these Bucaniers seemed to be, in respect to all others; that yet there should be such an Oeconomy (if I may say so) kept and regularity practiced among themselves, so that every one seemed to have his property as much secured, as if he had been a member of the most Civilized Community in the World*" (Exquemelin 1699: Anonymous Editor's Preface). An 18th-century commentator was even more impressed with the effectiveness of pirate constitutions in this regard. Their social contract, he argued, "which kept Peace amongst one another, and under the Title of Articles, has produced a System of Government, which I think, (considering what the Persons were who

fram'd it) as excellent for Policy as any Thing in *Plato's Commonwealth*" (*Weekly Journal*, May 23, 1724).

3.2 Regulating negative externalities and providing piratical public goods

The second feature pirates' social contracts required to facilitate cooperation was an ability to prevent negative externalities and provide public goods. Pirates' constitutions achieved the former by establishing rules that carefully regulated activities likely to generate harmful spillovers that would inhibit the greater crew's ability to cooperate, such as negligence in caring for their arms. As Captain Phillips' articles read, for instance, "*That Man that shall not keep his Arms clean, fit for an Engagement, or neglect his Business, shall be cut off from his Share*" (Johnson 1726–1728: 342–343). Roberts' articles, recounted above, also restricted drinking, gambling, and other activities that tended to erupt into inter-crew conflict if left unregulated (Johnson 1726–1728: 211). Some articles also regulated smoking to ensure the crew's safety (Johnson 1726–1728: 342–343).

Pirates' social contracts provided for public goods—specifically, the need to solicit full effort from crewmembers—by creating an early form of social insurance. This social insurance reduced the private cost individual pirates incurred by putting themselves at risk when they exerted full effort. Pirate articles specified that before the proceeds of successful plunder were divided according to the pay scale established in the piratical social contract, a certain sum would come out of the common purse to provide for those injured in the line of duty. As Article IX of Captain Roberts' crew's constitution read, for instance: "*If . . . any Man should lose a Limb, or become a Cripple in their Service, he was to have 800 Dollars, out of the public Stock, and for lesser Hurts, proportionately*" (Johnson 1726–1728: 211–212). Different limbs were worth different amounts, reflecting the different values pirates attributed to these appendages, most likely in work-related purposes. The buccaneer's articles were the most detailed in this regard. According to the articles Exquemelin described, "the wounded, [and those] who might have lost a limb or suffered injuries" were "compensated as follows: for the loss of a right arm, 600 pieces of eight or six slaves; for a left arm 500 pieces of eight or five slaves. The loss of a right leg also brought 500 pieces of eight or five slaves in compensation; a left leg 400 or four slaves; an eye, 100 or one slave, and the same award was made for the loss of a finger. If a man lost the use of an arm, he would get as much as if it had been cut off, and a severe internal injury which meant the victim had to have a pipe inserted in his body would receive 500 pieces of eight or five slaves in recompense" (1678: 71). In at least some pirate crews, disability insurance payments appear to have continued indefinitely. As one ship's articles read, for instance, "*He that shall have the Misfortune to lose a Limb, in Time of Engagement, shall have the Sum of one hundred and fifty Pounds Sterling, and remain with the Company as long as he shall think fit,*" presumably drawing continual disability support from the crew's "public Stock" (Johnson 1726–1728: 308).

To further encourage full effort, pirates' social contracts contained incentive provisions that paid bonuses to crewmembers who displayed exceptional courage, were the first to spot potential targets, and so forth, out of the common purse. According to Sect. VIII of pirate captain Ned Low's articles, for instance, "*He that sees a sail first, shall have the best Pistol or Small Arm aboard of her*" (*Boston News-Letter*, August 1–August 8 1723; A full and exact account, of the tryal of all the pyrates, lately taken by Captain Ogle . . . 1723: 66). These bonuses helped align the private and social benefit of individuals' full effort, which in turn reduced pirates' disincentive to free ride, improving social cooperation.

3.3 Preventing officer predation

The final feature pirates' social contracts needed to satisfy to enhance cooperation was to prevent the pirate leaders referred to above—captains and quartermasters—who crewmembers established to facilitate the other two major functions of pirate governance, from abusing their authority. The first step pirates took to achieve this was explicitly providing for democratic decision making in their constitutions: “*Every Man has a Vote in the Affairs of Moment.*” It's particularly in this sense that pirate articles were truly pirate *constitutions*. They not only established the rules governing pirate ships. They also established “rules about the rules”—i.e., the decision-making criteria for the selection of laws and leadership. Pirate articles were more than a simple list of social regulations. They governed how these regulations and the officers of their administration could be selected.

By placing the power to install and remove pirate captains from authority in the crew's hands, pirates' constitutional democracy created an important check on captain misconduct. Pirate democracy operated on the basis of one pirate, one vote, “The Rank of Captain being obtained by the Suffrage of the Majority” (Johnson 1726–1728: 214).¹² As Captain Johnson noted, “it was not of any great Signification who was dignify'd with [this] Title; for really and in Truth, all good Governments had (like theirs) the suprem Power lodged with the Community, who might doubtless depute and revoke as suited Interest or Humour” (1726–1728: 194). Pirates liberally exercised their constitutionally created right to democratically “revoke” power from their captains, “as suited Interest of Humour,” and elect new ones to replace them. Crewmembers deposed captains for any behaviors they thought were not in their best interest (see, for instance, The trials of eight persons indited for piracy &c ... 1718: 23; Johnson 1726–1728: 139, 214; Information of Richard Moore, HCA 1/55, fol. 96, 1724; Snelgrave 1734[1971]: 198; *Boston News-Letter*, February 4–February 11, 1725). The result was a lively democracy to say the least. One crew went through 13 captains in the space of a single voyage (An account of the conduct and proceedings of the late John Gow ... 1725: xi–xii). The threat of popular removal therefore was highly credible, creating a powerful incentive for pirate captains to use their power to serve their “constituents” interests rather than using this power to self-deal (Leeson 2007).

In addition to creating democratic controls, pirates' social contracts also instituted a separation of powers to prevent captain predation, “so very industrious were they to avoid putting too much Power into the hands of one Man,” as one pirate put it (Hayward 1735: 42). This separation of powers looked and operated just like the “division” and “arrangement” of “several offices,” “each” acting as “a check on the other” that American constitutional architect James Madison described in Federalist No. 51—but more than half a century before he described it (Hamilton et al. 1961: 322).

To check the captain's power, pirates created the office of the quartermaster, discussed above. Under this division of authority captains exercised command during conflict; but in day-to-day operations, quartermasters wielded control over most important activities. Pirates democratically elected their quartermasters and delegated them authority to oversee the distribution of provisions, watch over the loot and distribute each man his share, administer punishments, and adjudicate crewmember disputes, as discussed above (Johnson

¹²Captain Francis Spriggs, given two votes by his crew, is the only exception I can find to the “one pirate, one vote” rule. Even here, however, as one released prisoner described it, Spriggs was still “over-power'd by Votes” from the remaining crew. See *British Journal*, August 22, 1724. The only members of the pirate crew who might not be allowed to vote were boys and forced men. See The arraignment, tryal, and condemnation, of Capt. John Quelch ... (1704: 18); The trials of eight persons indited for piracy &c ... (1718: 24). Remarkably for the time, free black pirates could vote (see, Leeson 2008b).

1726–1728: 213). Thus, at the trial of pirate captain Stede Bonnet, for instance, Ignatius Pell, Bonnet’s boatswain, testified that the captain “went by that Name; but the Quarter-Master had more Power than he” (The tryals of Major Stede Bonnet, and other pirates . . . 1719: 38; see also, Snelgrave 1734[1971]: 199–200; *British Journal*, August 22, 1724; Johnson 1726–1728: 423). Although captains earned larger shares than quartermasters, quartermasters were in many ways the more powerful officers.

According to James Madison, for democratic checks and balances to have their strongest effect, “Ambition must be made to counteract ambition” (Hamilton et al. 1961: 322). Quartermasters, who frequently were frontrunners to succeed their captains in this office if a crew democratically deposed its captain from command, achieved precisely this. After pirate captain Charles Vane’s crew removed him from command, for instance, it elected its quartermaster to captain in his place (The tryals of Captain Jack Rackam, and other pirates . . . 1721; see also, Johnson 1726–1728: 479). Quartermasters’ resolve to truly act as “Trustee for the Whole,” as Johnson described their position, was undoubtedly strengthened by the fact that serving their crews’ interest was the surest way to be elected to the office of captain (1726–1728: 213). In turn, this strengthened captains’ resolve—if they wanted to remain captains anyway—to do the same. Further improving quartermasters’ commitment to serve their crews’ interest were pirate constitutions, which circumscribed how they could use their authority by making rules about how booty could be divided, lawbreakers could be punished, and so on, explicit (Leeson 2007). Quartermasters who abused their authority not only had little chance of being elected captains. They were popularly removed from their existing positions of power by disgruntled crews. For instance, when pirate captain John Gow’s second in command, James Williams, grew violent and unruly, his crew “loaded him with Irons” and “resolved to put him on Board” a captured vessel “with Directions to the Master to deliver him on Board the first English Man of War they should meet with, in order to his being hang’d” (An account of the conduct and proceedings of the late John Gow . . . 1725: 23).

4 The unanimity rule and the cost of pirate decision making

Central to *The Calculus of Consent’s* analysis of social contract formation is the balancing of what Buchanan and Tullock (1962) call “decision-making costs” and “external costs.” Decision-making costs are the transaction costs society’s members incur in coming to agreement on social decisions. They depend critically on the kind of social decision-making rule that is used. Since more inclusive social decision-making rules require the agreement of more people, decision-making costs rise the more inclusive the social decision-making machinery becomes. Dictatorship, which isn’t inclusive at all, lies at one end of the decision-making cost spectrum; it minimizes decision-making costs. Unanimity, which is totally inclusive, lies at the other end of the decision-making cost spectrum; it maximizes decision-making costs.

External costs are the costs borne by the members of society who disapprove of a social decision that is ultimately undertaken. As for decision-making costs, the key factor that influences the size of external costs is the kind of social decision-making rule that is used. The more inclusive the social decision-making rule, the lower the external costs, and vice versa. Unanimity thus minimizes the external costs of social decision making; dictatorship maximizes the external costs of social decision making.

Buchanan and Tullock (1962) call the sum of decision-making and external costs the “total interdependence costs” of social decision making. The most efficient social rule-making

machinery is that which minimizes total interdependence costs. It's easy to see the difficulty involved here, however. Since decision-making costs and external costs are inversely related, any movement toward or away from a more inclusive social decision-making machinery has an offsetting effect on total interdependence costs. Reducing decision-making costs entails increasing external costs and vice versa. The optimal decision making rule is found by balancing decision-making costs and external costs at the margin. The efficient social decision-making machinery in a particular case therefore depends on how severe the increase in one kind of cost will be by reducing the other, which in turn depends upon the relative importance of the social decision under consideration.

If the decision being contemplated is one of great importance to most members of society, such as which individuals will have the right to have a say in who their political leaders will be, a decision-making rule closer to unanimity will be efficient. For such a decision the external costs for those who disapprove of the decision are very large. As Buchanan and Tullock (1962) point out, in this case it's worth bearing higher decision-making costs to prevent even more significant external costs.¹³ For very important decisions, since even a small movement away from more inclusive social decision-making machinery increases external costs by more than it decreases decision-making costs, society minimizes total interdependence costs by relying on a more inclusive social decision-making rule. This situation contrasts with that in which the decision being contemplated is relatively unimportant to most members of society, such as the kind of paper the social rules will be written on, and thus external costs under almost any social decision-making rule are extremely low. For these kinds of decisions, since movements away from more inclusive social decision-making machinery reduce decision-making costs by more than they increase external costs, a less inclusive social decision-making rule is efficient.

The calculus of pirates' social decision-making machinery was guided by precisely the balancing of decision-making versus external cost considerations that Buchanan and Tullock identify in *The Calculus of Consent*. Indeed, pirates' social decision-making rules at each level of social decision making correspond to those rules Buchanan and Tullock's analysis suggests is efficient at these levels. First, as discussed above, pirate social contracts—their constitutions—required unanimous consent. This, of course, corresponds with Buchanan and Tullock's argument that the preeminent importance of "rules about the rules" for individuals' welfare dictates unanimity as the efficient decision-making rule at this meta-level of social decision making. Since pirate articles set up the entire system of rules a consenting pirate would be required to live by for the remainder of his service as a crewmember—from laws against theft, to division of booty, to workers' compensation coverage—the cost a pirate incurred if he disapproved of these rules but had to suffer under them nevertheless, i.e., the external cost of anything other than unanimity, was extremely large.

Second, at the post-constitutional social decision-making level—social decision making over "rules within the rules"—pirates relied on a simple majority decision-making rule. Pirate constitutions provided for majority rule, for example, for electing captains and quartermasters. Here, simple majority, rather than unanimity, was efficient because the choice of captain and quartermaster, while very important, was not as important as the general overarching system of rules a pirate and his ship's officers had to live by. Since external costs were relatively lower in the case of deciding who would be captain or quartermaster, it made sense to accept some additional external costs in order to reduce decision-making costs. Thus, consistent with the prediction of Buchanan and Tullock's analysis, unlike their

¹³For a critical analysis of the efficiency of Buchanan and Tullock's unanimity principle, see Rae (1975).

constitutions, pirates selected their leaders by simple majority. In short, the same balancing of decision-making versus external costs *The Calculus of Consent* identifies as a critical variable influencing the social decision-making machinery individuals will consent to for governance determined pirates' decision-making machinery in establishing their social contracts.

5 Concluding rem-arrgh-ks

My analysis of the calculus of piratical consent leads to several conclusions. First, the myth of social contract is a myth. Early 18th-century pirates existed in a state of nature and many entered into written agreements unanimously with the express purpose of creating political authority to pull themselves out of this state of nature and facilitate social cooperation. In this sense, these pirates' political system is the "holy grail" of social contract theory. Sea bandits' social order demonstrates that the social contract theory of government can be more than a mere theory. At least in the case of many pirates, this theory is also an accurate description of how society formed political authority to emerge from the state of nature and facilitate social cooperation.

Second, pirates created a system of constitutional democracy founded in an explicit social contract for precisely the reasons Buchanan and Tullock (1962) identified in the contractarian theory of government they described in *The Calculus of Consent* and with the same effect. Despite their criminality, or perhaps because of it, pirates' demand for "protective state" functions, "productive state" functions, and the need to prevent rulers endowed with the authority to perform these functions from using it to prey on society was as pronounced as it is for the members of any other society.

The calculus of piratical consent reflected the same balancing of decision-making and external costs central to the social contract theory in *The Calculus of Consent*. At the highest level of rule making—the constitutional level—pirates relied on an efficient unanimity rule, as the external costs of less than unanimity outweighed the additional decision-making costs of requiring each pirate's agreement. At the post-constitutional level, pirates relied on a simple majority decision-making rule that reflected the disproportionately greater decision-making costs of achieving unanimity relative to external costs of less than unanimity. This simple majority rule was also efficient, as it minimized the total interdependence costs of social decision making for post-constitutional decisions.

Finally, and perhaps most important, pirates' genuine social contracts worked—and by some contemporary accounts, worked better than the "conceptual" or "tacit" social contracts that underlie "legitimate" governments. As one 18th-century writer described this success, pirates' "Government, like all others, is founded upon Covenant, it was Mens agreeing to be governed according to their particular Judgements, and particular Appetites, that first set up Commonwealths, and they consented for the Benefits of Society, that any Man who injured another should suffer such and such a Penalty: Now the Inconveniencies which have happened in most Commonwealths are, that those appointed to preside, have found Means of grasping greater Power than was designed them, and of screening themselves from the Punishment due to their Crimes, by this first Covenant." "But," he continued, "I find the Constitution of the Pyrates is executed according to its primitive Intent." According to this pirate contemporary at least, had the effectiveness of pirates' social contract "been so in all other Commonwealths, we should not have known what was meant by arbitrary Power" (*Weekly Journal*, May 23, 1724).

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