Opportunism and Organization under the Black Flag*

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The prospect of opportunism poses a constant threat to firms. Firms that can't overcome this threat have no chance of succeeding in their market. To conquer the competition, firms must first conquer the specter of self-dealing that plagues their internal operation. The terms "opportunism" and "self-dealing" are used broadly to connote any behaviors by firm members that provide them private benefits at other firm members' expense. Opportunism within the firm has two sources: that which originates at the point of firm management and that which originates at the point of their employees. For example, managers at Enron, World Com, Madoff Securities, and Tyco, among others, behaved opportunistically by diverting firm resources to themselves or abusing their authority over employees. Employees may behave opportunistically by shirking or engaging in activities that make work easier for them but make it harder for their colleagues to do their jobs. Whatever its source, self-dealing undermines intra-firm harmony, cooperation, and firm productivity.

Modern firms aren't the only organizations that confront the threat of opportunism. Legitimate business organizations in eras past confronted this threat too, as have illegitimate ones. Successful firms such as Semco Manufacturing, Nucor Steel, Whole Foods, and Men's Warehouse have designed structures to negotiate and neutralize the risk for intra-organizational opportunism. Such structures prevent behaviors that are at odds with the firm's overall success.

To gain some insight into the broad varieties of internal opportunism that modern firms face and the successful organizational structures they may use to prevent it, this article investigates the economic organization of early 18th-century Caribbean pirates. Caribbean pirate firms are long gone from this world. But the basic problem situations they confronted are surprisingly similar to those that modern firms confront. Of course, these problem situations differ rather drastically in particulars. Pirates were outlaws: they earned their livelihoods by plundering honest merchantmen on the high sea. Legitimate modern firms create wealth for society rather than siphoning others' wealth off for themselves: they earn their livelihoods by providing valued goods and services and, in doing so, improving other peoples' lives.

Despite this important difference, there's much to be learned about how to improve the operation of firms by examining the operation of pirates. Indeed, in some ways, the very criminality of pirates' criminal organization makes it a *more* useful organization to mine for potential organizational lessons relating to opportunism rather than a less useful one. The reason for this is straightforward. Since pirates were criminals, the opportunistic pressures that pirates felt were dramatically stronger than those that legitimate organizations feel. The severity and varieties of self-dealing that can exist in legitimate firms are limited by the law. Managers may assign the least enjoyable tasks to employees they personally dislike and employees may steal credit for their coworkers' efforts. But the law prevents managers from murdering employees they don't like and employees from stealing their coworkers' paychecks. The law is imperfect in this regard. But it dramatically decreases the risk of the most serious and destructive forms of intra-firm opportunism.

This isn't so in criminal organizations. There are no legal protections to limit the extent of intra-firm opportunism. For example, opportunism can be violent. Given the individuals who are involved—individuals who've demonstrated a willingness to disregard traditional social rules and a desire to earn a living by coercing others—it's reasonable to expect that if opportunism can't be contained or prevented, it *will* be violent. Similarly, in criminal firms, the prospect of opportunism through property theft looms large: the law doesn't stop criminal employees from plundering from one another. In criminal organizations, there's no limit to self-dealing in terms of its variety, frequency, or severity. The cost of failing to prevent intra-firm opportunism is therefore larger for criminal firms and poses a more direct threat to their firm members' ability to cooperate than in legitimate firms.

The cost of failure to prevent intra-firm opportunism is larger for criminal firms for a second reason as well. Unlike legitimate firms, which merely go out of business if they fail to adequately address the threat of internal opportunism, failure to achieve this in the criminal context means something much worse: capture by the authorities and, if you're an 18^{th}-century pirate, death at the end of a hangman's rope.

Using a criminal organization to glean organizational wisdoms for modern firms is therefore more reasonable than it may initially seem. For instance, we can be sure that any organizational wisdoms so gleaned are robust. If pirates' institutions could control opportunism and secure intra-firm harmony in organizations of debauched and lawless rogues, they almost certainly will be able to control opportunism and secure intra-firm harmony in modern firms.

Focusing on pirates' criminal organization brings into focus the sources of potential internal opportunism that plague profit-seeking organizations in general and the features of successful solutions to these problems. Since pirates couldn't rely on government, or anyone else for that matter, to dampen the severity of the potential problems they confronted, or to solve these problems for them, examining their organization presents opportunism-mitigating institutions "in the raw."

MANAGER OPPORTUNISM

Managers are a main source of intra-firm opportunism. This isn't because managers are bad people. It's because managers wield certain kinds of control and exercise certain authorities over firm employees that firm employees don't wield over them. For example, managers set employees' break times, determine the distribution of employee pay, delegate employee tasks, and so on.

Managerial control isn't arbitrary. It's an efficient response to the difficulties of coordinating team production where measuring inputs' marginal products is costly. To prevent employee shirking, managers exercise monitoring, delegation, and "disciplinary powers," which increases cooperation between firm members and thus firm production.

The problem is that managers who have the authority necessary to promote intra-firm cooperation also have the authority necessary to behave opportunistically. For example, a manager with the power to determine employee salaries may use this power to reward his friends or punish his enemies, benefiting himself at other firm members' expense. Similarly, a manager who exercises control over resources that are supposed to be used to send employees to conferences or training events may divert some of these resources to himself to send himself on a vacation. Nearly every authority a manager possesses can be converted into tool for creating private benefits for himself that injure the rest of the firm.

Pirate Democracy

The specter of manager self-dealing was no less threatening in pirate firms. Like legitimate firms, pirates firms also required "managers"—or, in pirates' context, what might better be called "leaders." Pirates understood "how shatter'd and weak a Condition their Government must be without a Head." Many important piratical decisions, such as how to engage a potential target, the method to pursue when chasing a target or being chased by authorities, and how to react if attacked, required snap, executive decision making. There was no time for disagreement or debate in these cases. Conflicting voices would have made it impossible to undertake the most essential tasks.

Pirate firms needed someone to maintain order, distribute victuals, payments, and administer discipline to unruly crewmembers. Maintaining order was especially important in pirate firms. The typical institutions of governments, such as courts, police, and laws, which ultimately provide order in legitimate firms, didn't exist for pirates. Somebody, for example, had to adjudicate crewmember conflicts if any semblance of order could be hoped for. And somebody had to be empowered to control firm members who constantly created conflicts or otherwise refused to do what they were supposed to. Pay and victual distribution were also important tasks in pirate firms and involved authorities that not everyone could have. If every pirate were allowed to distribute his own pay and provisions, there would be a free-for-all leading to a violent melee. It made more sense to charge this task to a single person instead. That way, order could be maintained and everyone could be sure that he received the compensation and victuals he was supposed to receive. There was no way pirate firms could avoid these basic tasks that were indispensible for them to function. And there was no way they could avoid empowering a certain firm member—creating a "leader"—to perform them.

To provide such leadership, pirates had a captain. However, captains posed a problem for pirates similar to the problem that managers pose for employees in legitimate firms. What was to prevent a captain endowed with authorities from behaving opportunistically and turning his power against his crew for personal benefit? A pirate captain with the power to make important decisions during battle could order crewmembers he didn't like to the most dangerous battle positions. Similarly, a captain with the power to determine the distribution of victuals could keep the choicest provisions for himself while giving the rotting provisions to his least favorite crewmembers, and so on.

The first part of pirates' organizational solution to the specter of manager opportunism was democracy: pirates popularly elected their captains. The logic behind using democracy to constrain captain self-dealing was simple. If the captain abused his power to perform the leadership duties that were important to promoting the firm's ability to earn profits, crewmembers could depose him and elect a less opportunistic captain in his place. Democratic, firm-wide elections for captains aligned captains' and crewmembers' interests. To retain his office, the captain had to conform to his crewmembers' will, which meant refraining from using his office opportunistically. Thus, by converting the office of captain to a democratically elected one, pirates ensured that "they only permit him to be Captain, on Condition, that they may be Captain over him."

Pirate democracy operated on the basis of one pirate, one vote, "The Rank of Captain being obtained by the Suffrage of the Majority." As 18th-century pirate chronicler

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 supream Power lodged with the Community, who might doubtless depute and revoke as suited Interest or Humour.”

Pirates used their system of democracy to oust captains who they deemed to be using their leadership position opportunistically in any way. Pirate captain Benjamin Hornigold’s crew deposed him from command because he “refused to take and plunder English Vessels.” Hornigold’s patriotism (he was an Englishman) was viewed as a kind of opportunism. He was using his authority as captain to select targets not on the basis of profit maximization, but rather to assuage the guilt he felt for attacking robbing on the high sea. So his fellow firm members voted him out of his captainship.

Pirates wanted to make sure that captainship “falls on one superior for Knowledge and Boldness, Pistol Proof, (as they call it),” so they also removed captains who showed cowardice. For instance, Captain Charles Vane’s “Behavior was obliged to stand the Test of a Vote, and a Resolution passed against his Honour and Dignity . . . deposing him from the Command.” Vane’s cowardice was seen as another kind of opportunistic behavior. His decision to abstain from attacking targets wasn’t based on firm profits; it was based on satisfying his personally felt fears. Thus his crew removed him from command.

Other pirates deposed their captains from command for violating firm policies, such as the rule that required them to mercilessly slaughter resistors. Captain Edward England “was turned out of Command” by his crew for this. England behaved opportunistically by using his authority to cater to his fondness for a merchant captain that had resisted his crew and who therefore, per pirates' rule instituted to maximize profits by discouraging merchantmen from resisting them, was to be killed. In response, England's firm members voted for to terminate his captainship.

You can get an idea of the effectiveness of pirates' intra-firm democracy in controlling captain opportunism by considering the remarks of one pirate contemporary, which point to the rarity of captain self-dealing. Perplexed by an anomalous pirate captain who abused his crew, he puzzled, "The captain is very severe to his people, by reason of his commission, and caries a very different form from what other Pirates use to do . . . often calling for his pistols and threatening any that durst speak to the contrary of what he desireth, to knock out their brains."

Further evidence of pirate democracy's effectiveness in controlling captain opportunism can be found in the fact that pirate captains couldn't secure special privileges for themselves at their crews' expense. Their lodging, provisions, and even pay were nearly the same as that of ordinary crewmembers. As Johnson described it, aboard pirate ships "every Man, as the Humour takes him . . . [may] intrude [the captain's] Apartment, swear at him, seize a part of his Victuals and Drink, if they like it, without his offering to find Fault or contest it." And unlike on merchant or Royal Navy vessels, "any body might come and eat and drink" with the captain as they please. In other cases, "the Captain himself not being allowed a Bed" had to sleep with rest of the crew in far less comfortable conditions. Or, as one pirate observer exclaimed, "even their Captain, or any other Officer, is allowed no more than another Man; nay, the Captain cannot [even] keep his own Cabbin to himself."

The success of pirate democracy in constraining boss predation helps explain why, counterintuitively, "the People [pirates overtook] were generally glad of an opportunity of entring with them." Crewmembers in pirates' organizations suffered less boss abuse than crewmembers did in parallel, legitimate organizations, such as merchantmen or ships of the Royal Navy.

The organization of legitimate vessels needed captains also, but needed managers for somewhat different reasons than pirates. This means that they too confronted the threat of manager opportunism. However, as alluded to previously, unlike pirate firms, these vessels largely failed to control manager self-dealing. Historian Marcus Rediker has documented the frequency of captain self-dealing on 18th century merchantmen and naval vessels. He shows how on merchant ships, captains used their authority to steal from employees, settle personal scores, direct more victuals to themselves, and exploit crewmembers in more heinous ways. Things weren't much better on Royal Navy ships.

When you consider the fact that, in stark contrast to pirate democracy, the organization of these legitimate vessels was rigidly autocratic, this isn't surprising. Rather than organizing in a way that would help control captain self-dealing, these ships organized in a way that exacerbated this problem. Merchant ship owners and officials in the Royal Navy weren't stupid. There were good reasons why these legitimate vessels were organized autocratically instead of democratically as pirate ships were. But autocratic organization wasn't "free." It came at a steep price: manager self-dealing was much more frequent and often more severe on these ships.

Piratical Separation of Power

Democracy wasn't the only way pirates controlled leader opportunism inside their firms. The ability to popularly elect and depose captains was a powerful way to constrain captain self-dealing. But pirates could prevent captain opportunism better still if captains didn't have the means at their disposal to engage in it. Totally removing captains' power to behave opportunistically wasn't possible. Pirates needed power in this leadership office—they needed and benefited from captains wielding certain powers that other crewmembers didn't have.

But that didn't mean that *all* of the firm's important authorities had to be concentrated in one person's—the captain's—hands. For example, there was no reason that the captain had to exercise decision making power in battle *and* the power to allocate provisions. This is significant since, to the extent that pirates could separate important powers within their firms, they could reduce the prospect of captain opportunism equivalently.

Of course, by taking some authorities away from the captain, pirates would have to put them in some other crewmember's hands instead, which created the possibility that this other crewmember would behave opportunistically. But pirates had a solution for this too. And, by spreading authority around, pirates could decrease the extent of the self-dealing that any firm member could engage in if he behaved opportunistically.

As the pirate Walter Kennedy testified at his trial: "Most of them [pirates] having suffered formerly from the ill-treatment of Officers, provided thus carefully against any such Evil now they had the choice in themselves . . . for the due Execution thereof they constituted other Officers besides the Captain; so very industrious were they to avoid putting too much Power into the hands of one Man."

The primary "other officer" pirates constituted for this purpose was the quartermaster. The way this office worked is straightforward. Captains retained absolute authority in times of battle, enabling pirates to realize the benefits of autocratic control required for success in conflict. However, pirate crews transferred power to allocate provisions, select and distribute loot, adjudicate crewmember conflicts, and administer discipline to the quartermaster, whom they also democratically elected:

> For the Punishment of small Offences . . . there is a principal Officer among the Pyrates, called the Quarter-Master, of the Men's own choosing, who claims all Authority this Way, (excepting in Time of Battle:) If they disobey his Command, are quarrelsome and mutinous with one another, misuse Prisoners, plunder beyond his Order, and in particular, if they be negligent of their Arms, which he musters at Discretion, he punishes at his own dare without incurring the Lash from all the Ship's Company: In short, this Officer is Trustee for the whole, is the first on board any Prize, separating for the Company's Use, what he pleases, and returning what he thinks fit to the Owners, excepting Gold and Silver, which they have voted not returnable.

This separation of power removed captains' control over activities they traditionally used to self-deal, while empowering them sufficiently to direct plundering expeditions. According to Johnson, due to the institution of the quartermaster, aboard pirate ships "the Captain can undertake nothing which the Quarter-Master does not approve. We may say, the Quarter-Master is an humble Imitation of the Roman Tribune of the People; he speaks for, and looks after the Interest of the Crew." The only exception to this was "in Chase, or in Battle" when crews desired autocratic authority and thus, "by their own Laws," "The Captain's Power is uncontroulable."

Notably, under the pirates' system of divided power, crewmembers democratically elected both captains *and* quartermasters. Indeed, pirates often elected quartermasters to replace deposed captains. For instance, after Charles Vane's crew removed him from command, it elected its quartermaster to captain in his place. This practice helped create competition among pirate officers, which assisted in further checking the likelihood of officer opportunism and encouraged officers to serve their crews' interests.

Pirates took the separation of power within their firms seriously. One pirate captive records an event in which the captains of a pirate fleet borrowed fancy clothes that were part of the loot their crews acquired in taking a recent prize. These captains hoped their stolen finery would attract local women on the nearby shore. Although the captains intended only to borrow the clothes, the crews became outraged at their captains who they saw as transgressing the limits of their narrowly-circumscribed power. As the observer described it, "The Pirate Captains having taken these Cloaths without leave from the Quarter-master, it gave great Offence to all the Crew; who alledg'd, 'If they suffered such things, the Captains would for the future assume a Power, to take whatever they liked for themselves.'"

“Pirate Codes”

Pirates diminished the prospect of captain opportunism by democratically electing captains and transferring powers he would ordinarily exercise to a second officer, the quartermasters, instead. But how did pirates control quartermaster opportunism?

Democracy was one way pirates prevented quartermaster self-dealing. But pirate firms created a second institution for this purpose as well: constitutions. Modern commentators often call these documents “pirate codes,” but pirates called them “articles of agreement.” The logic behind how pirate constitutions controlled quartermaster opportunism is straightforward. It worked in conjunction with the logic behind pirate firms’ democratic constraints on leader self-dealing.

In its constitution, each pirate firm made the terms of the duties that quartermasters were charged with explicit. Pirate constitutions specified how much each crewmember was to be paid, how much each crewmember was to receive in provisions, the conditions under which quartermasters could punish crewmembers, and the process the quartermaster was to follow in adjudicating crewmember disputes.

By making these items explicit, pirate constitutions created “bright-line rules” that effectively defined when a quartermaster was legitimately exercising a “managerial” authority versus when he was abusing this authority and behaving opportunistically instead. Firm members could now readily determine when a quartermaster was, say, punishing a crewmember in accordance with the need for intra-firm order, which firm members wanted him to do, or when he was punishing a crewmember opportunistically, say to satisfy a personal grudge. When pirates observed the latter, they could use their democratic power to depose the opportunistic quartermaster from his command. Given this threat, quartermasters were encouraged to use their authority legitimately.

Consider, for example, the constitution that crewmembers in Captain Roberts' pirate firm created:

> 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.*
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> II. *Every Man to be called fairly in Turn, by List, on board of Prizes, because, (over and above their proper Share) they were on these Occasions allowed a Shift of Cloaths: But if they defrauded the Company to the Value of a Dollar, in Plate, Jewels, or Money, Marooning was their Punishment. If the Robbery was only betwixt one another, they contented themselves with slitting the Ears and Nose of him that was Guilty, and set him on Shore, not in an uninhabited Place, but somewhere, where he was sure to encounter Hardships.*
>
> III. *No person to Game at Cards or Dice for Money.*
>
> IV. *The Lights and Candles to be put out at eight a-Clock at Night: If any of the Crew, after that Hour, still remained enclined for Drinking, they were to do it on the open Deck.*
>
> V. *To keep their Piece, Pistols, and Cutlash clean, and fit for Service.*
>
> VI. *No Boy or Woman to be allowed amongst them. If any Man were found seducing any of the latter Sex, and carry'd her to Sea, disguised, he was to suffer Death.*

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

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

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

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

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

Consider the ways in which these rules that made it easier for pirate firm members to detect and coordinate a response to quartermaster opportunism. Section I, for example, makes it explicit that (except under special circumstances) each firm member is to receive an equal allocation of victuals. Sections II-IX identify the conditions under which the quartermaster may punish a firm member and the various punishments he may impose for these violations. And section X makes explicit the compensation each pirate is to receive (including the quartermaster) when the quartermaster distributes payments.

Tony Hsieh, CEO of Zappos, an e-commerce call-center with more than 1,500 employees, has created his own modern-day version of a pirate code for his company. Hsieh has created a list of "Ten Commandments" for all his employees to follow. These commandments, such as “Deliver WOW through service” and “Create fun and a little weirdness,” drive all company decisions from deciding where to locate, whom to hire and, lately, whom to downsize. The commandments are published in Zappos’ culture book, which is distributed to all employees. In this book, one finds “codes” about spending time with team members off the job (10 to 20 percent is recommended), questions on how to hire employees (ask prospective employees what their theme song is), and rules for profit-sharing.

EMPLOYEE OPPORTUNISM

The second main source of intra-firm opportunism is the firm’s employees. Although the most memorable examples of opportunism within the firm involve managers self-dealing, employee self-dealing is at least as common. Unlike their managers, employees don’t have special authorities they can exploit for personal benefit at the firm’s expense. But that doesn’t mean they’re without opportunities or temptations for opportunistic behavior. These opportunities and temptations simply have different forms. My discussion focuses on two of them: shirking and the creation of “negative externalities.”

First, consider shirking. Many production activities are jointly produced. They require teamwork. But when output is jointly produced, employees find it easier to shirk—to do little, free ride on the labor of others, and to enjoy the credit for successes they did nothing to achieve. Similarly, if a jointly produced output fails, team members can “pass the buck” by passing the blame to their colleagues. This is just another way of exploiting the fact that managers have a hard time assigning credit or blame for failures when a project involves a team of people. If free riding becomes endemic, the firm produces at well below its potential.

Employees can also behave opportunistically by engaging in activities that they personally enjoy but make it harder for their coworkers to do their jobs. Many cases in which employees create such “negative externalities” for their coworkers are mundane. But even mundane negative externalities can have a pronounced affect on firm productivity if they undermine workplace morale and employees’ ability to work together. For example, an employee may play his music loudly despite the fact that those around him find it distracting. This is a mundane kind of employee opportunism. But if you’ve ever tried to work next to someone engaged in such behavior, it will be obvious to you the effect this can have on worker productivity. Even an employee’s irksome habits, such as tapping his pen, can create productivity stifling frictions. Such habits may become the source of verbal confrontations that make it awkward or difficult to work closely with that coworker in the future. Employees may self-deal by engaging in such activities despite the costs that their behavior imposes on other firm members.

Pirate Regulations and Incentives

The prospect of employee opportunism also plagued pirate firms. Pirates confronted a shirking problem on their ships, which left unsolved would prevent them from taking prizes. Pirating was a team-oriented enterprise. In order for a pirate ship to maximize its chances to take a prize, each crewmember needed to exert his full effort. This meant remaining diligent in his daily duties, but especially giving his all in battle with a target, in extracting loot from victims, and so on.

A dutiful pirates' job, then, could be very dangerous. In addition to the dangers of simply living and working aboard a ship, there was also the prospect of battle with quarries. Pirates faced a risk of being injured, which, in addition to imposing an immediate cost on them, might also make it more difficult for them to find future (pirate or non-pirate) employment. If any individual pirate slacked on the job, maybe not doing the most onerous part of his daily duties, or staying back a bit in the midst of battle so as not to get hurt, unless he played a critical function, the crew's probability of success would only be minimally diminished. With the exception of a few key pirates, the crew's success didn't depend on any individual pirate. Because of this, shirking wasn't costly to the individual pirate but exerting full effort was. This created an incentive for pirates to free ride on others' efforts.

Pirates also had ample opportunities to behave opportunistically by indulging in behaviors that created negative externalities for other pirates. These opportunities were amplified by the fact that pirates lived and worked together in very close proximity to one another aboard their ships. For example, if one pirate decided to indulge in booze late in the evening, it could prevent other pirates from getting their sleep. Because of their close quarters, one pirate's excessive drinking generated a negative externality for other pirates.

Given the nature of pirates' work and workplace, certain coworker behaviors that might only be annoying in other contexts, or lead to minor skirmishes, could be downright dangerous in pirates' context, or lead to physical fights that jeopardized the livelihood of the entire crew. Consider, for example, smoking. It might be annoying if a fellow employee discards his cigarette butts in your favorite place to eat lunch at the back of your workplace's property. But if a pirate smoker dumped his pipe carelessly on the ship, it could ignite the large quantity of gun powder the vessel was carrying, blowing the crew to pieces.

Similarly, consider the potential result of disagreements stemming from negative externality problems in a pirate firm. If a coworker constantly "forgets" to refill the paper in the printer, leaving that task to you when you next go to print, you may make a pointed comment to them. This could lead to an argument that makes it awkward for you to work together on joint projects. But if two pirates got into an argument over an equally small matter, it could very easily come to cutlasses and blunderbusses, which not only endangered other crewmembers but could also destroy the firm itself—the pirate ship.

In pirate firms, there was an even more serious kind of negative externality creating behavior employees could engage in: violence and property theft. As pointed out in this paper's introduction, in legitimate firms the law severely circumscribes this kind of opportunism. There's little chance that one employee will stab another or steal his paycheck. But in pirate firms, stabbing a coworker or stealing his pay were real possibilities. Such behavior benefited the self-dealing pirate who engaged in it. But his benefit necessarily imposed an uncompensated cost on the object of his opportunism. By contributing to an insecure workplace, his violence or property theft undermined other firm members' ability to be productive as well.

Pirates prevented employee opportunism, and the serious intra-firm problems it could lead to, by creating regulations that governed behaviors in the workplace. Pirates also incentivized firm members to "give their all" in production activities. Pirate firm enshrined these regulations and incentives in their articles.

Consider the constitution in Captain Bart Roberts' crew, recounted previously. Sections II and VIII of Roberts' crew's articles regulated theft and violence respectively, addressing the most serious kind of negative externality creating behavior pirate firm members could engage in. Sections II and V of 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. Sections III and V on John Phillips' *Revenge* also 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*."

Other pirate firm regulations sought to regulate different kinds of privately beneficial, but negative externality creating, employee behaviors. For example, some pirate ships forbade activities such as firing one's guns or smoking in areas of the ship that carried combustible goods, such as gunpowder, since this also imposed negative spillovers on the firm. According to the articles aboard John Phillips' ship, for example, "*That Man that shall snap his Arms, or smoak Tobacco in the Hold without a Cap to his Pipe, or carry a Candle lighted without a Lanthorn, shall suffer the same Punishment as in the former Article*."

On similar logic, section IV of Roberts' constitution limited drunken raucousness; section III prohibited gambling; and section VI prohibited women (and young boys). Each of these behaviors, while privately beneficial to the indulging pirates, were likely to lead to negative externalities in the form of on-board fights or inter-firm member tensions. So pirates regulated them.

Other constitutional provisions regulated activities that were likely to invite employee shirking. For example, section V of Captain Roberts' firm's articles required crewmembers to keep their weapons in good working order, or, as the article regulating this behavior on Phillips' ship read: "*That Man that shall not keep his Arms clear, fit for an Engagement, or neglect his Business, shall be cut off from his Share*."

When it came to preventing employee opportunism, pirate firms' rules weren't all stick. They provided some carrots to incentivize hard work too. For instance, section IX of Roberts' firm's constitution incentivized pirates to contribute full effort by subsidizing work-sustained injuries: "*If . . . any Man should lose a Limb, or become a Cripple in their Service, he was to have 800 Dollars, out of the publick Stock, and for lesser Hurts, proportionately*."

Similarly, pirate articles encouraged employees to work hard by creating incentive provisions. These provisions paid bonuses to crewmembers who displayed exceptional courage in battle, were the first to spot potential targets, and so forth, out of the common purse. Similarly, according to Section VIII of Ned Low's crew's articles, "He that sees a sail first, shall have the best Pistol or Small Arm aboard of her." These incentive provisions must have worked well since, as Johnson noted, "It must be observed, they [pirates] keep a good Look-out; for, according to their Articles, he who first espies a Sail, if she proves a Prize, is entitled the best Pair of Pistols on board, over and above his Dividend."

Compensation and Cooperation

An important feature of pirate articles is the pay structure they instituted. Pirates were paid in shares of booty the crew seized rather than in fixed wages. This isn't surprising given (a) the need to incentivize difficult-to-monitor behaviors, and (b) the fact that there were no "pirate capitalists" with the finances required to front employees their wages or to provide fixed wages on a continual basis. Instead the pirates' rule was "no prey, no pay."

One outstanding feature of pirates' pay structure is the fact that it was very flat. On Roberts' ship, "*The Captain and Quarter-Master* [were] *to receive two Shares of a Prize; the Master, Boatswain, and Gunner, one Share and a half, and other Officers one and a Quarter*," with everyone else receiving one share. The difference between the highest and lowest paid person in this pirate crew was thus only a single share. The same scarcely-progressive pay scale prevailed on pirate captain Edward Low's ship, whose articles stipulated: "The Captain is to have two full shares; the Master is to have one Share and one half; The Doctor, Mate, Gunner and Boatswain, one Share and one Quarter;" and everyone else one share. This was also true on Captain John Phillips' pirate ship whose articles read: "*the Captain shall have one full share and a half in all Prizes; the Master, Carpenter, Boatswain and Gunner shall have one Share and* [*a*] *quarter*," and everyone else a single share.

There's an organizational reason for the relative flatness of pirate pay scales: pay scale flatness facilitated member harmony and coordinated firm members' incentives. Since inter-employee conflicts posed an especially great threat to pirates' success (given that such conflicts were likely to lead to violent clashes that would kill firm members and physically destroy the firm itself), it was especially important to avoid as many opportunities for violent conflict that could erupt into fighting and tear their criminal organization apart as possible. Unsurprisingly, probably the greatest divisive force that threatened this possibility was money. Suspicions of unfairness, favoritism, and simple envy created unhappy specters for pirate firms. To minimize the chance of these natural human emotions disrupting or even totally undermining their profit-making purpose, pirates eliminated the greatest potential source of these emotions—large material inequalities.

By more-or-less equally splitting their ill-gotten proceeds, pirates facilitated cooperation in another important way as well: through agreement about whether to continue plundering or to hang up the cutlass temporarily and dissolve the company instead. If nearly all pirates in a particular crew received the same payout from plunder, they were more likely to agree about whether to continue "on the account" or retire their expedition. This was important because it ensured that most pirates engaged in an ongoing plundering expedition had their hearts in it and would therefore exert full effort, improving the crew's chance of success. Contrast this with the situation that could prevail if different factions of a pirate crew had wildly different payouts from taking a prize. The faction that received a very large payout may be interested in ending the expedition immediately. These pirates might have enough to live on for a while and not wish to go any further. The faction that received a very low payout, on the other hand, may be interested in keeping the whole crew together until its members have also earned enough to temporarily retire. Flattening their pay structures helped pirates coordinate incentives across firm members and over time, enhancing their firms' ability to earn profits.

ORGANIZATIONAL LESSONS FROM BLACKBEARD

The study of opportunism and organization in 18th-century Caribbean pirate firms points to several lessons for today's organizations, which also face the problem of intra-organizational opportunism. First, intra-firm opportunism may originate at the level of managers *and* employees. Perhaps because the former typically receive greater media attention, there's a tendency to ignore or downplay self-dealing by employees. Yet it's among these firm members that self-dealing is often the most difficult to detect and thus self-dealing may be most rampant.

In legitimate firms, the varieties of potential employee opportunism are limited. Employees in these firms are unlikely to steal one another's property or to physically attack one another. But this doesn't maker employee opportunism unimportant. Even seemingly unimportant opportunistic behaviors, such as credit stealing or shirking in group work, can contribute to a workplace atmosphere of acrimony and animosity that undermines morale and cooperation, which are critical to maximizing firm productivity.

Rules that regulate employee behaviors are one solution to this problem. But equally important is finding ways to reward those who don't behave opportunistically, whether through pecuniary bonuses, or some other means. In other cases, "harmonizing" employee compensation may be a useful way to cope with employee self-dealing.

Pirate firms employed all three mechanisms to good effect. But this doesn't mean legitimate firms will find all of these mechanisms useful in every case. Nor does pirates' success with these mechanisms suggest that legitimate firms should adopt pirates' mechanisms literally. For example, it would be unproductive in most cases for legitimate firms to pay every employee the same. Rather, pirates' success with flattening their pay scales suggests that when thinking about how to structure compensation, in addition to thinking about compensation in terms of individual workers, it may also be useful for firms to think about compensation in terms of how it affects the structure incentives across employees working together as a team. For example, Whole Foods, Chaparral Steel, and Nucor Steel have open salary plans where all employees' pay plans are open for all employees to see. These firms have been able to improve team members' effort over time.

Second, as is well known, self-dealing at the managerial level is an important threat to guard against within firms. Managers are essential, but so are checks on their uses of authority. Pirates used democracy and separations of power to check and control opportunistic behavior by their leaders. This doesn't mean that legitimate firms should become "workers' democracies" and devolve all decision-making authority to employees. But it does mean that decentralizing authority where this is possible will often be desirable. For example, Ricardo Semler, CEO of Brazil's Semco Manufacturing, has associates evaluate their supervisors. These evaluations are posted for everyone to see. If a supervisor's evaluation is consistently low, that person is asked to step down. Executives are evaluated the same way.

Resorting to employee democracy to control managers in today's firms is more difficult. Pirates were able to do this without problem because the capital their firms used—their ships and ordnance—wasn't supplied by external financiers. Pirates stole their capital. Because of this, pirates were both the principles and the agents of their firms. For most firms, which have to raise capital externally, pirate-like democracy would be very difficult to introduce and would often be counterproductive. Rightfully, external financiers will want to have a say in managerial decisions (or the identity of managers) proportionate to the capital they have at stake. They will therefore be unhappy with proposals that seek to give workers the right to democratically make such decision instead. Further, giving workers this power in such situations would create incentive problems that would ultimately be destructive to many firms. What pirate firms highlight isn't the desirability of worker democracy per se. Instead they highlight the need to think creatively about how to organize firms internally to align managers' incentives with the incentives of their workers so as to achieve maximum productivity.

Finally, pirate firms' successful reliance on *privately created* intra-firm institutions to cope with organizational opportunism points to the effectiveness and robustness of such institutions. As noted at the beginning of this paper, to address some of the most severe kinds of intra-firm opportunism, such as outright theft and violence, legitimate firms can rely on government, which prohibits such behaviors and enforces prohibitions against them. However, because they were outlaws, pirates had no recourse to government, its laws, or its mechanisms of enforcement to resolve the potential for intra-firm opportunism. Yet they seem to have done so very successfully by resorting to private devices instead.

This doesn't mean that firms should turn to "keel hauling" or "Moses' law" (40 lashes, save one) to discourage employees from shirking, which is how pirates enforced their intra-firm regulations. Nor does it mean that firms should maroon opportunistic managers, which pirates sometimes did to opportunistic captains. But it does suggest that firms don't need to wait for the government to create laws against various forms of intra-firm opportunism to effectively control opportunistic behaviors within the firm. Private firm-level initiative will often be able to address the potential for self-dealing among managers and employees without government assistance and firms should look here first when they think about organizational solutions to the problems of intra-firm opportunism.

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