



Conflict, Cooperation and Competition in Anarchy

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Abstract. Caplan and Stringham (2002) attempt to rebut the “paradox of cooperation” (Cowen and Sutter 1999) as it applies to libertarian anarchy. The paradox in the context of anarchy implies that if private defense agencies can cooperate to avoid conflict they can also collude to reestablish coercion. Caplan and Stringham argue that arbitration is self-enforcing while collusion requires solution of a prisoner’s dilemma. We agree that collusion requires more cooperative efficacy than arbitration, but maintain that arbitration requires considerably more organization than a simple coordination game. If a network of protection agencies can organize sufficiently to arbitrate disputes, they can also create a barrier to entry by refusing to arbitrate with entrants.

Key Words: anarchy, cooperation, evolution of government

JEL classification: D74, H11, D72.

Cowen and Sutter (1999) outlined a “paradox of cooperation.” If civil society can use norms to enforce cooperative solutions, that same society will be prone to certain kinds of cartels. In other words, cooperation-enhancing social features will bring bad outcomes as well as good outcomes. To provide a simple example, the Nazis relied on cooperation in addition to their obvious coercive elements in perpetrating their crimes. The ability to organize therefore is a mixed blessing. In the context of libertarian anarchy, this argument implies that private defense agencies are likely to collude and reestablish coercion. We refer the reader to our original paper for the details of the argument (see also Cowen 1992, 1994).

Caplan and Stringham (2002) attempt to rebut the argument as it applies to libertarian anarchy. They maintain that inter-agency collusion requires solution of a prisoner’s dilemma problem, while private defense agencies face only a coordination problem in resolving disputes peacefully through arbitration. They view membership in an arbitration network of agencies as self-enforcing and believe that such a network will not evolve into a cartel. Self-interested individuals will defect from a cartel in the absence of a sufficiently vigorous punishment mechanism. Private defense agencies supposedly have enough cooperative efficacy to overcome the coordination problem but cannot collude. Thus the arbitration network will not devolve into government.

Caplan and Stringham have advanced the debate on cooperation and anarchy. We accept their contention that collusion requires greater organization among network members than establishing a system of arbitration. We remain skeptical though about the likelihood of benevolent noncollusive anarchy. Establishing an arbitration mechanism we contend brings

us closer to collusion than their arguments suggest. An arbitration scheme requires far more organization than a simple convention, like driving on the right hand side of the road, which significantly narrows the space between cooperation and collusion. An arbitration network should have sufficient organization to create a barrier to entry by refusing to arbitrate disputes with an entrant agency. Even if the network initially lacks the organization necessary to collude, entry barriers create conditions likely to lead to the evolution of government.

1. Confrontation Games, Equilibrium Selection and Arbitration

Conflict is costly, and the desire of utility maximizing individuals to control the cost of conflict creates the potential for ordered anarchy. Figure 1 presents the normal form of a confrontation game between two private protection agencies. Two protection agencies, Able and Baker, face a potential confrontation due to a dispute between clients of the two agencies. A customer of Able accuses a customer of Baker of violating her rights as entailed in her contract with Able. The customer seeks redress against the alleged perpetrator through Able. Each agency has two actions in the game, which we label for convenience Challenge and Backdown. Challenge for Able refers to aggressively pursuing their customer's claim, and using force if necessary to prosecute the offender. Challenge for Baker refers to aggressively defending their customer. The payoff matrix in Figure 1 presents utility payoffs for each agency, but we will only use the ordering of the outcomes from 4 (best) to 1 (worst). Conflict occurs if both agencies choose their Challenge action, and is costly. The most preferred outcome for each agency is to Challenge and have the other agency Backdown. The costs of conflict exceed the financial stake each agency has in this one interaction so each agency prefers to Backdown to Challenge when the other agency Challenges.¹

The game in Figure 1 is a coordination game with two Nash equilibria in pure strategies, one where Able backs down to Baker's challenge and the second where Baker backs down to Able's challenge. The costs of conflict provide an incentive for a peaceful resolution of the confrontation (Rothbard 1978, Friedman 1989, Benson 1990), but do not determine which equilibrium will prevail. Nonetheless we can already see the potential for the evolution of

		Baker	
		Challenge	Backdown
Able	Challenge	1,1	4,2
	Backdown	2,4	3,3

Payoffs are ordinal with 4 indicating an agency's most preferred outcome and 1 its least preferred outcome.

Figure 1. A confrontation game between protection agencies.

government in the interests of some parties to the adjudication prevail over the interests of others.

We also can see that only one of these equilibria is libertarian (Sutter 1995). Both equilibria may be peaceful, but at least one equilibrium does not respect individual rights. For instance, Able (the victim) backing down is an equilibrium of the confrontation game. Caplan and Stringham (and other proponents of anarcho-capitalism) have not to our minds offered an argument why the competitive, libertarian equilibrium is likely to prevail.

The confrontation between the agencies is more than a pure coordination game. The agencies care about which equilibrium prevails; in other words, the game also involves division of a surplus. Repeated play of the confrontation game in Figure 1 increases the incentive of each agency to fight and attempt to establish the equilibrium in which they capture the gains of cooperatives. Anarchy might be peaceful after an initial conflict, but equilibrium selection then would depend on the relative strength of the agencies. If might makes right, as Umbeck (1981) argues, only by luck would the libertarian equilibrium prevail. And over time, an agency that consistently backs down would lose customers. Customers will patronize agencies that can win battles, and the protection market will become increasingly concentrated.

Arbitration could alter the game as portrayed above. We can imagine, for instance, that the agencies take turns backing down, as suggested by an arbitrator. If the arbitrator decides based on evidence of rights violation, libertarian rights would be respected and each agency could stay in business. Technically speaking, arbitration offers the hope of a libertarian outcome through a correlated equilibrium of the confrontation game, with the arbitrator's decision serving as the correlating signal. Establishing a correlated equilibrium, however, is more complicated than implementing a Nash equilibrium in a pure coordination game. For one thing, the agencies' ignoring the signal and playing one of the Nash equilibria of the game in Figure 1 remains an equilibrium with arbitration. So the non-libertarian outcomes do not go away. Furthermore establishing a credible arbitrator and inducing the parties to follow the arbitrator's decision requires organization. The organization required for an arbitration network creates the potential for anti-competitive actions by the network; we now turn to this topic in more detail.

2. Arbitration, Barriers to Entry, and Collusion

Consider the decisions a group of defense agencies must make to arbitrate disputes arising between the agencies' clients. The network must have some means of determining which agencies are members, who will serve as arbitrators in disputes among the members, and the rules that will apply in resolving disputes. These decisions cannot be made once and for all; rather the network will need a procedure to determine membership. In a competitive protection market, new agencies might always arise, or clients of the network agencies might travel farther and encounter agencies not currently in the network. Agencies might fail to abide by an arbitrator's decision, so the network will also need a rule to expel or punish members. And since arbitrators retire, or may fail to apply the agreed on rules properly, the network will need a procedure for deciding acceptable arbitrators and rules for arbitration.

A network with this degree of organization could create a barrier to entry into the local protection market by refusing to arbitrate disputes with an entrant. Suppose Young Guns is a new agency trying to enter the market. The members of the network have a common interest in preventing new competition so the network votes to not admit Young Guns. The network then has a ruling requiring members not to arbitrate disputes with nonmember agencies.² Members are supposed to stand firm and demand that Young Guns back down in any dispute. Young Guns will then either have higher costs from constant conflict or be unable to effectively defend its customers' interests. This serves as a barrier to entry.

In this framework, consider the (implicit) argument of Caplan and Stringham. If Able has a dispute with Young Guns, it faces the Confrontation game in Figure 1 and has an incentive to defect from the network's decision to fight Young Guns to avoid the cost of conflict. In essence the network is relying on Able (and other members with disputes with Young Guns' customers) to bear the costs of conflict to drive the entrant out of the market. Able may be reluctant to provide this public good for the network without side compensation but may nonetheless stand firm against Young Guns.

Let us consider in more detail Able's decision to abide by the network's rule not to arbitrate disputes with nonmember agencies, as opposed to defecting from the network and cutting a separate and "reasonable" deal with Young Guns. The network could threaten expulsion against members who accommodate entrants. Membership in the network is valuable, so a credible threat of expulsion could make Able willing to stand firm. Furthermore, the network could extend the entry barrier contract to arbitrators, threatening to stop employing arbitrators who arbitrate disputes with non-network agencies. Normally cheating on a cartel is difficult for members to detect, but monitoring arbitrators might provide an easy way to detect cheating. Without arbitration Able faces the confrontation game from Figure 1 and the choice between the two pure strategy equilibria. The "division of the surplus" element of the confrontation game provides Able an additional incentive to stand firm; Able wants to induce selection of the equilibrium in which Young Guns backs down. Indeed, backing down against Young Guns could be particularly costly for Able, which could lose many of its customers to other agencies in the network willing to stand firm. Unlike the case of a price cartel, a member may not gain from defecting from an agreement to challenge entrants. Finally, the network may back up Able should its firm stand with Young Guns lead to a violent conflict; assistance from the network in a fight would share the cost of this collective good.

The network also might decide on the less extreme strategy of unfair arbitration with entrants—entrants might have to accept arbitration by one of the network's arbitrators with the arbitrator instructed to decide in favor of the network. The arbitrator might give Young Guns enough in his decision to prevent a violent conflict, but not enough to be fair. Although the reader might object that Young Guns would never agree to such biased arbitration, their only alternative is conflict in each dispute with the network. By construction of the example, the incumbent, not the entrant, has the first-mover advantage. Young Guns could avoid constant conflict only by backing down on a regular basis, which would render it an ineffective entrant.

The network could go one step further and force member agencies to change their laws. The network will have procedures for expelling member agencies. If say a two-thirds vote

of members is necessary to expel a member, a supermajority of agencies could demand changes the laws of minority agencies. Suppose that one agency in the network allows its customers to grow, buy and use drugs, while all other agencies enforce drug prohibition. Customers of the prohibitionist agencies might object to nearby availability of drugs. The other network members could threaten the libertarian agency with expulsion if it does not prohibit drugs. Once expelled, the agency faces a situation parallel to that of the entrant discussed above. If the entry deterrent is credible, the expulsion threat may be credible as well.

The arbitration network may not be able to fix prices or establish a full cartel, at least not immediately. Although all current members of a network have a common interest in deterring entry by new rivals, all have the incentive to chisel on a price fixing agreement. And expelling members is costly for a network. Network members might be reluctant to expel price cheaters, and the potential exists for defection of several agencies at once. Also, price-cutting may be difficult to observe. Thus we accept Caplan and Stringham's contention that collusion will require greater cooperation than establishing a network.

That being said, price competition still may disappear over time. If a core group of agencies manage to institute coercive taxation, the incentive for price shading will disappear. Governments may compete against each other with lower tax rates, as we find in today's world as well, but the previous customers now have become taxpayers, who must pay the price whether they like it or not. This part of the story is more speculative, but it shows how easily inter-agency cooperation can evolve into widespread coercion and indeed centralized government.

No doubt we can imagine other, non-coercive equilibria for the game. "Folk theorems" suggest most beneficial outcomes can be sustained as an equilibrium in a repeated games, provided agents hold the right conjectures and have long enough time horizons. Nonetheless we believe that our postulated process is at the very least plausible.

3. Empirics

We must take seriously the fact that governments exist all around the world, for better or worse. Even without further analysis, government appears to be the most likely equilibrium of a large number of political games. History shows that "cooperating to coerce" is relatively easy to establish, regardless of the exact path to that final state of affairs.³

Looking to more specific examples, the arbitration network of protection agencies is similar to the merchant guilds described in Grief, Milgrom and Weingast (1994). Merchant guilds arose to protect traveling merchants from expropriation by the princes of different cities. Caplan and Stringham cite the guilds in support their claim that arbitrating interagency disputes is self-enforcing. Yet refusing to trade with princes who expropriate merchants' property was not self-enforcing. A boycott of a city that recently expropriated a merchant was vulnerable to defection and difficult to enforce. The volume of trading falls when a boycott is declared, so the marginal value to a city of a merchant rises and at a sufficiently low volume a prince's promise not to expropriate merchants becomes credible. Trading by only a few merchants could allow the city to defeat the boycott. Merchants needed the organization of the guild to generate a boycott effective enough to deter expropriation by

princes; the guild threatened boycott-violating merchants with expulsion and membership in the guild had to offer benefits (Grief, Milgrom and Weingast 1994). Once organized to protect merchants, guilds often managed to restrict entry to benefit current members.

The National Collegiate Athletic Association (NCAA) provides another example of a network formed to help overcome a coordination problem but which has succeeded in cartel behavior. The NCAA was formed in the early 1900s to enforce rules to limit the violence in college football (Byers 1995). An organization was needed to write rules, schedule games and identify schools not complying with the rules. But the organization moved beyond the simple coordination tasks to perform as a cartel. The major cartel function of the NCAA has been of course to limit the compensation of student-athletes to tuition and room and board, despite the millions of dollars of revenues generated by major athletic programs each year (Fleisher, Goff and Tollison 1992). The organization created to enforce the rules also had the ability to adopt new rules, and in 1952 the NCAA approved measures to punish members who paid players; adoption of the punishment mechanism reduced the competitive balance of major college football (Eckard 1998). Caplan and Stringham suggest that competing network might reduce the potential of a coordinating network to enforce a cartel, but the existence of a rival organization in college sports, the National Association of Intercollegiate Athletics (NAIA) has failed to limit the NCAA's cartel function.

4. Conclusion

We do not contend that an arbitration network will immediately begin colluding and become a government. The ability to deter entrants, however, begins the devolution toward government. Collusion by the member agencies is superior from their point of view. We thus continue to believe that a paradox of cooperation holds for the adjudication of legal disputes. Even the ordered, libertarian equilibrium in anarchy is likely to result eventually in the reemergence of government. It makes us doubt the value of experimenting with anarchy, given the risk of chaos and the potential for a decidedly unlibertarian equilibrium.

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Notes

1. If an agency backs down from a challenge in this instance, they might well lose their customer. The present value of profit from an individual customer over her expected term of patronage is plausibly small compared to the cost of even a moderately violent confrontation. If the costs of conflict are always relatively small, anarcho-capitalism is likely to be quite violent.
2. At least disputes arising among residents of the local area.
3. Caplan and Stringham do not take this global evidence seriously enough. Their comment considers numerous other supposed "network industries" (of their own choosing), but does not consider the universality of government in modern industrial society.

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