

## Contracts without Government\*

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**Abstract:** According to standard theory, the need for government results from the need for coercive third-party contract enforcement. This paper employs a game-theoretic approach to social interaction under anarchy to show that the neither *third-party* nor *coercive* third-party enforcement is necessary for cooperation and exchange. Empirical evidence from experimental economics is presented to strengthen the claim that a high degree of cooperation is consistent with absence of *third-party* enforcement. Evidence from history and modern international trade is presented to substantiate the claim that *non-coercive* third-party enforcement is often just as effective in securing contractual performance as government.

### I. Introduction

From time immemorial men have pondered the question of anarchy. While it seems as though government has simply “always been there,” it clearly has not. Social interaction both logically and temporally precedes government. Men must have interacted for their purposes at least to some degree before the state emerged. Indeed, without their prior interaction for this purpose government could not have formed in the first place. Recognition of this fact leads us to the insight that we have not always existed in the context of the state. In some distant time we existed in anarchy.

This fact begs the question, ‘where does government come from?’ Perhaps the most prominent explanation of government’s origin maintains that the state emerges out of a need for contract enforcement (Greif 1989; Zerbe and Anderson 2001; Landa 1994;

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\* The author would like to thank the Earhart Foundation for financial support as well as Peter Boettke, Christopher Coyne, Bryan Caplan, Tyler Cowen, the Editor, and two anonymous referees for their helpful

Gunning 1972). According to this view, which we will call the ‘standard account,’ where there is infinitely-recurring contact between contracting parties, anarchy poses no particular problem. Here the market mechanism can be trusted to ensure cooperation. However, in the real world infinitely-recurring contact between individuals is unlikely. Consequently, there is room for government to improve the situation. Awareness of this reality leads to the development of the state. Government-provided contract enforcement establishes two conditions necessary for peaceful exchange. On the one hand, state contract enforcement give individuals an *ex ante* basis for trust, reducing uncertainty in exchange, and on the other hand it gives individuals the security *ex post* that if defrauded they can achieve restitution. In short, the exogenous coercive mechanism of government fills the enforcement void left unfilled by anarchy.

The remainder of this paper proceeds as follows: Section II distinguishes between coercive and non-coercive enforcement mechanisms. Section III uses a game-theoretic approach to explore the claim that *third-party* enforcement is necessary for cooperation, and presents the results of experimental economics to substantiate its conclusion. Section IV employs a game-theoretic approach to examine the claim that *coercive* third-party enforcement is necessary for contract performance, and presents evidence from both history and modern international trade to strengthen its conclusions. Section V concludes.

## **II. Coercive and Non-Coercive Enforcement Mechanisms**

We may classify contract enforcement mechanisms into two groups: coercive and non-coercive. Coercive enforcement mechanisms are ones that entail direct punishment of the

contract-violating party. Direct punishment includes punishments like jail time or fines. Non-coercive enforcement mechanisms also punish the violating party but use indirect means to do so. Ostracism, injured reputation, refusal of future interaction or general boycott, for example, would all be considered indirect means of “punishment” under a non-coercive enforcement mechanism.<sup>1</sup>

Government is characterized by its monopoly on the use of coercion. Its contract enforcement mechanisms are consequently always coercive in nature. If one violates a contract with another party who then appeals to government, the state does not resort to ostracism or recommend to the aggrieved that he abstain from future dealings with the violator to punish him. Government uses coercive means—fine or imprisonment of the violator—to rectify the problem. In contrast, privately provided, market contract enforcement mechanisms may come in *either* coercive or non-coercive forms. Here the violator may be ostracized, boycotted, or bad-mouthed, or, if a private contract enforcement agency exists, he may be levied a fine.

While coercive means may be employed under anarchy or government, it is important to recognize that only government’s coercive means represent a monopoly power. Under anarchy, no private contract enforcement agency has a legal monopoly on the use of coercive punishment.

### **III. Do We Need Third-Party Enforcement?**

In asserting that government-provided enforcement is requisite for contract performance, the standard account assumes that *third-party* enforcement is necessary for cooperation.<sup>2</sup>

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<sup>1</sup> For more on non-coercive enforcement mechanisms see: Caplan and Stringham (forthcoming).

However, it may be that that third-party enforcement is not as important in ensuring cooperation as this view implies.

How can this be? Because the vast majority of our interactions in the marketplace do not hinge upon the existence of a coercive third-party enforcement institution to ensure that they are carried out smoothly.<sup>3</sup> Consider the following example. An individual eating at a restaurant has an agreement with the restaurant to provide him with food of the type and quality he selects from the menu for a certain price. If the food subsequently served to him falls short of the quality specified on the menu (or of the quality to be “reasonably expected”), the restaurant has failed to meet his end of the agreement with the diner.

Many diners have found themselves in this position at some point. How did they respond? Most diners expressed their dissatisfaction with the manager in some fashion in hopes of securing remuneration. Chances are the restaurant owner agreed to their request because he feared losing their business and the problem was solved. But what if the restaurant owner rejected the diner’s request and refused to repair the situation?

Many diners have found themselves in this situation before as well. How did they react then? They paid, and then thoroughly dissatisfied, left, vowing never to patronize the establishment again. Note that it probably never crossed the diner’s mind to appeal to the third-party enforcing institutions available to him. He did not consider, for instance, taking the restaurant owner to court for fraud or false advertising because the restaurateur

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<sup>2</sup> As Hobbes who is in many ways the originator of this view puts it: “. . . he that performeth first, has no assurance the other will perform after; because the bonds of words are too weak to bridle men’s ambition, avarice, anger, and other Passions, without fear of some coercive Power; which in the condition of here Nature, where all men are equal, and judges of justness of their own fears cannot possibly be supposed.” *Leviathan* ([1651] 1955, 89-90).

<sup>3</sup> The notion that third-party enforcement is not necessary to ensure contract performance is not new. Indeed, the idea can be found in the writings of economists from Hayek (1948) to Marshall (1949).

failed to honor his end of the agreement.<sup>4</sup> The diner simply punished the restaurant owner himself by never returning to his restaurant.

By doing this, the diner implicitly employed the so-called “trigger strategy” from game theory—“hit me once and I’ll never play with you again.” Simple though it may sound, this is the first and most convenient method of contract enforcement that we have available to us under anarchy or any other system for that matter. Indeed, it is probably the method of enforcement we use most often and in this sense serves as a focal point for social interaction (Macaulay 1963). Thus, for many purposes, this type of “second-party” enforcement is just as effective as coercive third-party enforcement in ensuring cooperation.<sup>5</sup>

#### *Empirical Evidence on the Need for Third-Party Enforcement*

Experimental trials of “Trust Games” provide evidence for our claim that third party enforcement is largely unnecessary in order to secure cooperation. In these games Player 1 has the option of either passing decision power and the possibility of mutually higher payoffs to his partner, or ending the game right there for a lower payoff. If Player 1 passes to his partner, his partner can either reward Player 1 by giving both Player 1 and himself some payoff larger than the payoff Player 1 could get by not passing decision power to Player 2, or he can take an even larger payoff yet leaving Player 1 with nothing. Thus, Player 1 must initially decide whether or not to trust Player 2 with the power to

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<sup>4</sup> Admittedly, this no doubt partly because of the prohibitive cost of litigation in this case. Indeed, our legal system is designed this way so as to deter such ‘frivolous’ lawsuits. However, the important point for our purpose is to recognize that this type of ‘second party enforcement’ mechanism is focal. Even if the cost of litigating was not prohibitively high, most diners would not choose to litigate, opting instead for the ‘second party enforcement’ mechanism described by the “Tit-for-Tat” strategy discussed below.

<sup>5</sup> For a discussion of cooperative behavior despite buyer-seller informational asymmetries see: Barzell (1982).

take advantage of the fact that he did not defect in round one, leaving both with the chance to earn more.

Not only is there *no* external enforcement here (coercive or non-coercive), but the interaction is of a one-shot nature. Despite this, these experiments consistently show considerable levels of cooperation, indicating that Player 1's trust is frequently rewarded. Indeed, "the data strongly reject the game theoretic hypothesis that in a single interactive play of the game subjects will overwhelmingly play non-cooperatively, and that conditional on moving down, players 2 will overwhelmingly defect" (Smith 1998: 11). Some experiments show 75% of Player 1s passing off to Player 2s and out of those, 76% of Player 2s choosing to cooperate.<sup>6</sup> In more elaborate versions of the trust game that involve the ability of Player 2 to punish Player 1 if he defects, cooperative play is even higher, suggesting that the ability of actors to punish those who cheat them in interaction considerably raises the likelihood that those they interact will choose not to cheat (Smith forthcoming).

"Ultimatum Games" where Player 1 is given a sum of money to divide as he sees fit between himself and Player 2 who may accept the offer yielding the offered payoff or reject the offer giving both players nothing, is also of a one-shot nature. Here Player 1 has incredible power to "cheat" Player 2. But experimental trials demonstrate that this outcome is far less likely to occur than we would think. The modal offer by Player 1s is an even split, yielding an equal payoff for both players.

Even more striking than this result are experimental runs of so-called "Dictator Games." In this game Player 1 has *absolute power* over the payoffs himself and Player 2 will receive. In the ultimatum game it may be argued that Player 1 fears the rejection of

his offer by Player 2 if he does not split the given sum of money equitably. But in dictator games, the split offered by Player 1 cannot be rejected. Player 2 must accept the division of money as dictated by Player 1. While some Player 1s offer nothing to Player 2s, many more offer Player 2s a higher sum (Smith 1998: 14-15). Indeed, in some trials, over 60% of dictators gave 20% or more of the total sum of money allotted to them to their counterparts (Hoffman, McCabe and Smith 1996).

Experimental results conclude that cooperation does not require a positive probability of repeat interaction for actors to cooperate (McCabe and Smith 2001b). Even in non-repeated interaction (with complete anonymity), when game theory declares players' dominant strategy is to defect, cooperation is not uncommon. Experimental economists chalk much of this up to that fact that "subjects bring their ongoing repeated game experience and reputations from the world into the laboratory" (Hoffman, McCabe and Smith 1996: 655). "Goodwill" plays a role in ensuring cooperation even where we least expect it (McCabe and Smith 2001a). Actors' experiences and reputations built from repeated interactions largely shape their behavior in non-repeated interaction. In other words, even when engaging in one-shot interactions where there appears to be a strong incentive to cheat, quite often actors will choose not to. In short, the evidence demonstrates that the absence of third-party enforcement has a much smaller effect on the level of cooperation than the standard view suggests.

#### **IV. Non-Coercive Third-Party Enforcement**

As we noted in Section I, according to the standard view, when there is infinitely-recurring contact between individuals, anarchy presents no particular problem and

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<sup>6</sup> See, for example: McCabe and Smith (2000).

government is not required. Once we step outside the world of infinitely-recurring contact, however, anarchy becomes problematic. Since contact is not likely to be infinitely recurring, radical uncertainty emerges between traders preventing potentially mutually beneficial trades from occurring.<sup>7</sup> So, by offering potential traders security that their contracts with others will be fulfilled, government rectifies the problem. As noted in Section II, state-provided enforcement must always be coercive in nature. Thus, the standard view goes a step beyond merely suggesting that third-party enforcement is necessary for contract performance. It asserts that cooperation requires *coercive* third-party enforcement. It may be, however, that *non-coercive* (i.e., non-state-provided) third-party enforcement is just as effective in securing cooperation.

Why is this so? Because *endogenous* to the market process under anarchy is a *non-coercive* third-party enforcement mechanism that *simulates infinitely-recurring contact and its cooperative outcome even when contact is not actually infinitely recurring*. Under anarchy, although a seller may know that he will never deal with any given customer again (that is, contact is not infinitely recurring), he also knows that if he breaks his contract with this customer, this customer will inform many others that he did so. Because *actual* buyers are able to impart information about a seller's practices to *potential* buyers, for the seller, the prospect of dealing with potential buyers is effectively the same as the prospect of dealing with actual buyers again.<sup>8</sup> In terms of knowledge about the seller, every potential buyer in the marketplace is equivalent to an actual buyer.

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<sup>7</sup> It is worth noting that it is not clear that as many of our interactions are of a "one-shot" nature as standard view implies. In fact, brief reflection on our daily activities reveals quite the opposite. Many of our interactions are repeated again and again with the same people and therefore ensure high levels of cooperation without coercive third party enforcement.

<sup>8</sup> "Actual buyers" are those that have already interacted with the seller. "Potential buyers" are those who have not yet interacted with the seller but who may do so in the future.

In this way, without government, the marketplace simulates infinitely-recurring contact and achieves the cooperative equilibrium achieved by *actual* infinitely-recurring contact.<sup>9</sup> This same mechanism holds in the event that a buyer violates his contract with a seller. Indeed, it not only acts to punish those who violate their contracts with others but also acts to punish those who are cheated but who fail to punish the cheater. Via this endogenous reputational element of market interaction, the problem with anarchy and need for government according to the standard view disappear. Note that while this form of contract enforcement is indeed a third-party mechanism, unlike government enforcement, this form is non-coercive. The exogenous enforcement mechanism of the state is at best redundant given the market enforcement mechanism that is endogenously created under anarchy.

Market participants operating in the context of this mechanism are essentially following Axlerod's "Tit-for-Tat" strategy. If a buyer or seller violates a contract, the aggrieved party informs others and the buyer or seller who violated the contract is punished. There is a penalty for cheating and cooperation does not ensue again until the buyer or seller who violated the contract demonstrates that he will not do so again. Experimental trials designed to test different strategies show the "Tit-for-Tat" strategy consistently yields the highest payoffs (Axlerod 1984). This being the case, it should come as no surprise that market interaction follows this pattern.

In contrast to our "Tit-for-Tat" approach, the standard approach implicitly models interaction under anarchy like a one-shot Prisoner's Dilemma game. In non-repeated interaction both individuals involved in a potential trade will have an incentive to violate

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<sup>9</sup> For a formal treatment of this type of mechanism and its robustness under varying degrees of observability see: Kandori (1992).

the contract, preventing the execution of mutually beneficial exchange. But for the most part the conditions of interaction under anarchy, just like conditions of interaction in the real world, are not set up like a Prisoner's Dilemma. In the real world, potential traders may choose who they would like to trade with, communicate with one another, and switch partners if they become dissatisfied with their original selection. Under these circumstances extremely high levels of cooperation prevail (Tullock 1999).

*Empirical Evidence on the Need for Coercive Third-Party Enforcement*

Historically, non-coercive reputation-based forms of contract enforcement have been prevalent. Eleventh century Maghribi traders, for example, operating in a framework of extremely limited legal contract enforceability and "much uncertainty" made wide use of this system (Greif 1989: 860). According to Greif, "[t]he evidence suggests that the observed 'trust' [between traders] reflects a reputation mechanism among economic self-interested individuals. By establishing ex ante a linkage between past conduct and future utility stream, an agent could acquire a reputation as honest, that is, he could credibly commit himself ex ante to not breach a contract ex post" (1989: 858-859). As theoretically anticipated above, historically, this non-coercive form of contract enforcement worked extremely well. Although most businesses were "conducted without relying upon the legal system" or "were not based upon legal contracts . . . Nevertheless, only a handful of documents reflect allegations about misconduct" (Greif 1989: 864).<sup>10</sup>

Research by Ellickson (1991), Bernstein (1992), and Benson (1989, 1990) provides additional historical evidence of the functioning of this mechanism in other

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<sup>10</sup> For a detailed account of the complex, private enforcement system used by the Maghribi traders see: Greif (1989, 1993).

areas of the market as well.<sup>11</sup> Recent work by Stringham (2001) illustrates the workings of this mechanism in the financial trading markets of seventeenth-century Amsterdam. Financial trading markets are often considered among the most elaborate and complex in the marketplace, yet even here reputation functioned effectively to enforce contracts in non-infinitely repeated interactions.

Reputation-based non-coercive third-party enforcement was successfully employed among many stateless tribes as well. The Hiri of Central Papua (Seligman 1910), the Te of the Central Highlands (Bus 1951), the Moka of Mount Hagen (Strathern 1971), the Kalinga of the Philippines Islands (Service 1975), and the Kula Ring of the East Paupo-Melanesian tribal groups (Landa 1983) all used “gift-exchange” systems predicated on reputation to enforce contracts.<sup>12</sup>

“[T]he instrumental function of the Kula Ring” is “the creation of networks of alliances among stateless societies so as to facilitate commercial exchange” (Landa 1994: 142). The way this system achieves this end is as follows: Within the Kula Ring, two ceremonial goods, necklaces and armshells, are circulated geographically between tribes in opposite directions. A Massim from one tribe that desires trade with an outsider offers him a non-ceremonial gift. This outsider in turn offers the initiating Massim a ceremonial gift. Those that fail to do so lose reputation and with it the possibility for trade. Within the Kula Ring gift-exchange system, particular ceremonial objects that have been circulating for long periods of time develop special names and, owing to their related history, indicate that their offerer is particularly trustworthy. Traders who fail to

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<sup>11</sup> For an exploration of workings of the reputation mechanism in labor markets see: Bull (1987).

<sup>12</sup> For additional historical evidence of contract enforcement without the state in China, Singapore and Malaysia see: Landa (1981).

fulfill obligations by reciprocating as the gift-exchange requires are not gifted named objects and may find it more difficult to exchange.

Although the evidence discussed above deals only with the effectiveness of the market's non-coercive third-party enforcement mechanism in small number settings, similar evidence exists on the effectiveness of this mechanism when a large number of individuals are involved.<sup>13</sup> This evidence comes from the area of international trade.

While most modern-day *domestic* trade occurs between relatively socially homogeneous groups where exchange relationships are enforced by the state, most modern-day *international* trade occurs between socially heterogeneous groups operating in an environment of "international anarchy" where the number of exchange relationships enforced by government is considerably smaller. Consequently, both the past and present facts of international trade provide substantial evidence concerning the effectiveness of the market mechanism in ensuring peaceful exchange.

Modern international commerce is an outgrowth of, *lex mercatoria*, or the "Law Merchant," a complex polycentric system of customary law that arose from the desire of heterogeneous traders in the late 11<sup>th</sup> century to engage in cross-cultural exchange. This system that linked traders from vastly different backgrounds was founded on custom and private arbitration as a means of resolving trading disputes.

In the eleventh through sixteenth centuries, voluntarily submitting one's business procedures and contract specifications, (including the arbitration process to be followed should a dispute arise), to the norms dictated by the Law Merchant served to create a reputation-based enforcement mechanism among potential trading partners. Traders who

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<sup>13</sup> For a discussion of the effectiveness of the market mechanism in securing contract enforcement among heterogeneous groups see: Leeson (working paper).

voluntarily submitted to the norms of the *lex mercatoria* signaled credibility to other traders. When disputes emerged, private arbiters oversaw the conflict and made a ruling. Traders concerned about future business found it in their interest to abide by the arbiter's rulings as other traders quickly cut relations with those who disregard them. Between the early twelfth and late sixteenth century, virtually *all European trade relations* were governed by such reputation-based contract enforcement through the *lex mercatoria* and met with great success.<sup>14</sup>

The story of modern international trade is very similar. “[M]odern international commerce still relies on private customary law and arbitration to adjudicate disputes” (Benson 1990: 299). Indeed, in the early 1990s, at least 90 percent of all international trade contracts had arbitration clauses (Benson 1995). Just as in eleventh through sixteenth century Europe voluntary submission to the norms of the *lex mercatoria* secured peaceful exchange through its reputation enforcement mechanism, so too does voluntary submission to the norms of the current *lex mercatoria* accomplish the same for modern international traders. Like in the past, current international commerce contracts often specify things like the business and arbitration practices (should a dispute arise) to be followed in the exchange. These specifications that potential trading parties voluntarily accept before actually engaging in trade are predicated on international commercial norms as evolved through the *lex mercatoria* (Lew 1978: 585). Those traders who are unwilling to submit themselves to the norms of *lex mercatoria* or who refuse to be bound by the findings of private arbitration lose reputation and business. Private international commerce organizations, most notably the International Chamber of

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<sup>14</sup> As Benson notes, “In fact, the commercial revolution of the eleventh through fifteenth centuries that ultimately led to the Renaissance and industrial revolution could not have occurred without . . . this system”

Commerce (ICC), often oversee such trade relations between members and arbitrate disputes when they emerge (Böckstiegal 1984). Membership in such communities indicates reputation and serves to disseminate information about the practices of other traders. As Benson put it, “communities of traders form wherein individuals interact with others that they know either personally through repeated dealings, or by reputation” (Benson 2002: 16).

This reputation-based system has functioned exceedingly well in securing peaceful exchange without government. Because reputation is important to international commercial traders they comply with judgements of private arbiters (Charny 1990: 409-412). Consequently, “arbitral awards are most generally promptly and willingly executed by business people” (David 1985: 357). Indeed, “[e]very research into the practice of international arbitration shows that by far the great majority of arbitration awards is fulfilled without the need for enforcement” (Böckstiegal 1984: 49).<sup>15</sup>

## V. Conclusion

The standard theory of government offers little insight into the necessity of the state. To the extent that government is needed because *coercive third-party* enforcement is required for cooperation and exchange, we have demonstrated that the need for government is highly questionable. Both theory and the results of experimental economics support the claim that a high degree of cooperation is sustainable without any

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(1990: 31).

<sup>15</sup> Before leaving this section it is worth noting that the transition economies of Eastern Europe also provide evidence of the effective operation of non-coercive third party enforcement. With government provided third party enforcement in shambles, “private rather than state mechanisms are used to solve disputes. These mechanisms range from social norms and pressures, to arbitration” (Hay and Shleifer 1998: 399). To the extent that contract enforcement occurs in these transitioning nations, it is “against a background of self-enforcing market mechanisms” that we see it happening (Rapaczynski 1996: 102).

*third-party* enforcement. To the extent that third-party enforcement is necessary at all, we have shown that *coercive* state enforcement is not required. Here both theory and the evidence from history and modern international trade suggest that *non-coercive* third-party enforcement is often just as effective in ensuring contract enforcement as government enforcement. Furthermore, while this paper did not consider this argument here, it is worth noting that even if coercive third-party enforcement is necessary, there is no reason to believe government is required for its provision.<sup>16</sup> Thus, while there may remain some legitimate concerns about the functioning of anarchy, contract enforcement is not one of them. Endogenous to the market process are mechanisms that operate to secure cooperation and contractual fulfillment without state enforcement.

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<sup>16</sup> Indeed, if the problems of non-infinitely repeated contact cannot be solved without resort to coercive third party enforcement, a profit opportunity for offering coercive enforcement will emerge and some business will undertake this enterprise. The market for this form of contract enforcement is not fundamentally different from the market for any other good or service that consumers demand. There is nothing inherent in the service of coercive third party contract enforcement that would exclude the possibility of its private provision a priori. In fact, historically, private contract enforcement worked quite well and for this reason remains far more common today than the standard account would suggest. See for example: Benson (1990).

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