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Working Paper 48

Efficient Anarchy

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Abstract

Can anarchy be efficient? This paper argues that for reasons of efficiency, rational, wealth-maximizing agents may actually choose statelessness over government in some cases. Where markets are sufficiently thin or where government is prohibitively costly, anarchy is the efficient mode of social organization. If total social wealth under conditions of relatively lower levels of trade is not substantially smaller than under conditions of relatively higher levels of trade, the cost of government may exceed the social benefits it provides. Likewise if the cost of a formal state is sufficiently large, even substantial difference in social wealth in these two scenarios may prove too small to justify the formation of government from a cost/benefit perspective. The framework I provide explains the persistence of anarchy in two major areas where we tend to observe it: among primitive societies and at the global level. (JEL P48)

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1 Introduction

Can anarchy be efficient? Conventional wisdom emphatically answers no. By providing formal enforcement, government enables individuals to realize gains from exchange they could not capture if the state were absent. Rationally self-interested agents therefore choose to form government. This rationale for the state is at least as old as Hobbes but remains alive and well in modern economics. As Nobel Prize winner Doug North put it: "Throughout history, individuals given a choice between a state—no matter how exploitative it might be—and anarchy, have decided for the former" (1981: 24). Political economists have accepted the efficiency of some formal authority in organizing society without question.[1] Is it possible that in some cases anarchy is actually optimal from the standpoint of social wealth?

The ubiquity of government today causes us to forget that numerous societies were stateless for most of their histories and that many remained so well into the 20th century. Many of these groups were in Africa and a few encompassed significant numbers of people. Consider for instance the Tiv, which included over one million individuals, the Nuer whose population has been estimated at 400,000, or the Lugbara with over 300,000 members. More striking yet is the fact that, globally, the world has and continues to operate in the context of "international anarchy." The continued presence of numerous sovereigns creates massive ungoverned interstices for many of the interactions between the inhabitants of these different nations.

The observed absence of formal rule in these environments requires explanation. If Hobbes and the generations of economists who have followed him are correct, anarchy is inefficient and formal rule should have quickly replaced vacuums of centralized authority. But why then did statelessness among numerous societies in Africa, for instance, last so long? For

[1] David Friedman (1973), Murray Rothbard (1977), Bruce Benson (1999b) and Randy Holcombe (2004) are rare exceptions in this regard.

that matter, what accounts for the continued existence of international anarchy? In short, how do we explain the persistence of significant arenas of anarchy over time?[2]

North (1990) suggests that inefficient forms of social organization may persist because of path dependence. Since in *most* instances where we observe the absence of effective formal enforcement (for example, in many transitioning economies) this arrangement is inefficient, it is tempting to conclude that in *all* instances where we observe this arrangement that this is so. It would therefore be very easy to mistakenly dismiss all instances of anarchy's persistence by reference to path dependence. In contrast, this paper will explore why it may actually be rational in some cases for wealth-maximizing individuals to choose *not* to form any government at all.

There are two general explanations for government's presence—social contract theory and predatory theory. The former suggests that agents choose to form government because it is socially efficient. Individuals recognize that by introducing the state they can move from a situation of conflict (or lesser cooperation) to one of greater cooperation (see Buchanan 1975; Buchanan and Brennan 1980; North 1981; North and Thomas 1973). The predatory theory of government on the other hand suggests that the state emerges out of the self-interested behavior of some agent (or group of agents) with a comparative advantage in using force (see Olson 1993 and McGuire and Olson 1996).[3]

This paper employs the social contract theory of government (or in this case, absence of government) described above. I do not take this theory to be an accurate description of the actual emergence of governments nor do I believe that governments consist of benevolent, social

[2] While no one has addressed this question, a small but growing literature deals broadly with the economics of anarchy. See for instance, Dixit (2004, 2003) Hirshleifer (1994), Bates et al (2002). Dixit's (2003) analysis is probably the most closely related to mine in that it considers the limits of self-governance and when formal governance becomes efficient.

[3] Levi (1988) points out that consent and predatory theories of the state are not mutually exclusive, since in either event a ruler requires the consent of at least some people to govern. While I accept this important insight, it is nevertheless possible to conceptually distinguish between these theories on the grounds outlined above.

welfare-maximizing agents and do not suffer from the standard problems of public choice.[4] Nevertheless, I adopt the contract theory of government because it offers the strongest justification for the state and thus allows me to demonstrate that, even in this case, there are important conditions under which anarchy is the socially efficient arrangement.

Section 2 of this paper considers the determinants of anarchy's efficiency. It looks at what factors impact the cost of having government and what factors impact the benefit government provides by moving society from a lower trade equilibrium to a higher trade one.[5] Section 3 applies this framework to observed instances of anarchy. In particular it uses this framework to shed light on why we tend to see statelessness in primitive societies and on the global scale. Section 4 concludes by discussing transitions from anarchy to government.

2 When is Anarchy Efficient?

As previous work has shown, in the absence of government, private, informal institutional arrangements emerge to prevent conflict and encourage cooperation (Benson 1989; Anderson and Hill 2004; Leeson 2004; Greif 1989, 1993, 2002; Ellickson 1991, Clay 1997; Landa 1994; Milgrom et al 1990; Greif et al 1994). These arrangements, such as the use of multilateral punishment among small groups via ostracism or boycott, the emergence of conflict inhibiting

[4] It is important to emphasize that assuming away predatory behavior on the part of government for my analysis is purely for the purposes of addressing the 'hardest case' for anarchy—when government only aims at enhancing social wealth. As a factual matter, both theory and evidence strongly suggest that political agents are self-interested and engage in predatory behaviors. In other words, although it is not considered here, the cost of government includes the potential for large "public choice costs," stemming from predatory political activities. For an excellent discussion of the public choice costs of government in its capacity as definer and enforcer of property rights see Anderson and McChesney (2003). Also, see de Soto (1989) who examines the outcomes of predatory governments on trade and social welfare. Finally, for a discussion of public choice costs of government in the context of international law see Benson (1999a).

[5] The paper employs cost/benefit considerations to explain/predict statelessness. Libecap's (2003) excellent work uses a similar approach to explain/predict when individuals contract for property rights where the state is absent. Following up on this, Haddock's (2003) important work considers the use of force to establish such rights where contracting for them is prohibitively expensive.

social norms, and the use of arbitration organizations for international trade, operate primarily through mechanisms of reputation.

For the most part, however, reputation mechanisms successfully secure exchange without formal enforcement among small, close-knit communities.[6] Their ability to enable agents to realize the gains from trade is therefore limited (see for instance, Dixit 2004; Greif 1993, 2002; Zerbe and Anderson 2001). As the traditional rationale for government suggests, by removing the state of uncertainty that surrounds interacting with agents outside of one's social network, government can improve social wealth by enabling additional exchange.

In a simple two-person model of exchange, let H be the sum of the payoffs to each individual of trade when government is present and let L be the sum of the individual payoffs of the relatively lower level of trade when government is absent where, $H > L > 0$. Individuals may coordinate either on the high trade equilibrium by introducing government, or the low trade equilibrium. For government to be efficient and rationally self-interested agents to prefer its presence, the cost of government, G, must be smaller than the benefits it provides. The benefit of government is the difference between social wealth in the two states of the world described above—that in which government exists and agents are in the higher trade equilibrium, and that which it does not and agents are in the lower trade equilibrium. Government is therefore an efficient solution to the social dilemma if and only if $G < H – L$. Where $G > H – L$, anarchy is efficient. Whether G is actually greater than $H – L$ obviously depends upon two things. First, the size of G, and second the size of the gap between social wealth when agents are in the higher trade equilibrium vs. when they are in the lower trade equilibrium.

[6] Klein's (1992) work on credit ratings suggests that reputation can be effective in large groups. Also on the effectiveness of reputation in large groups see Leeson (2004). However, the applicability of reputation mechanisms among large populations is overwhelmingly rejected in the literature that discusses its application. See for instance, Dixit (2004), Greif (1993, 2002) and Zerbe and Anderson (2001) among others.

2.1 The Cost of Government

The cost of government can be broken into three primary components: (1) first, there is a simple organizational cost of creating a state—the cost of organizing collective action. Concretely, the organizational costs of government include (a) the decision-making costs of arriving at the specific set of rules the state is to enforce and (b) the external costs of collective decision-making, which result from the fact that the group may sometimes make choices that are contrary to the interests of the individual (Buchanan and Tullock 1962). The organizational cost of government thus depends upon, in addition to other possible factors, the form of government or decision-making process that is followed in determining what set of rules the state is to enforce.

For example, because democratic governments require the consensus of multiple citizens rather than the will of one individual, the decision-making cost of democracy is higher than that of an authoritarian arrangement. Clearly, how much higher this cost is depends upon how difficult it is to create laws under democracy. Thus a democratic government that requires potential rules to receive a supermajority of its citizens' approval before becoming effective will have a higher organizational cost than one that requires only majority approval.

Because democratic government is based on popular consensus, its organizational cost is also higher where the population is larger and where the members of this population are socially distant and thus less likely to agree. Authoritarian government avoids these cost-raising factors because it circumvents the need to receive popular support of the rules it establishes. In contrast, the external cost of government will be lower under arrangements that require the approval of a larger number of individuals in the collective decision-making process. Thus democratic regimes will have lower external costs than authoritarian ones, and within democratic regimes, those that require supermajorities to make rules, for instance, will have lower external costs than those that only require regular majorities for such rules.

(2) The second cost of government is the cost of enforcing decided upon rules. These costs are expenditures associated with creating and maintaining police and military forces, and a court system. Enforcement costs are increasing in population size, as it is more expensive to police 1000 people, for instance, than it is to police 10. Besides population size, the enforcement costs of government are also increasing in population heterogeneity. Ethnically, religiously, linguistically, and otherwise fractionalized populations are more prone to disagreement, mistrust, and violent conflict than those that are less fractionalized (see for instance, Alesina et al 2003; Alesina and Spolaore 2003; Alesina and La Ferrara 2002). The state's enforcement entities—for instance the police and courts—are therefore deployed more frequently for the purposes of preventing and settling disputes among socially disparate populations than among more homogeneous ones. Finally, the form of government may influence enforcement costs as well. Democratic regimes, for instance, may have lower enforcement costs than authoritarian ones because their rules have broader public support and therefore do not require as much effort to enforce.

(3) The third cost of government is the cost of providing public goods other than those necessary to enforce decided upon rules (such as police and courts, which falls under the enforcement costs of government in (2)). These public goods include those the provision of which traditionally belongs to the state.[7] Roads and education, for instance, are two examples. The public goods cost of government is largely determined by the same factors as enforcement

[7] An important strand of work points out that many if not most of the public goods traditionally thought of as within the purview of state provision can actually be provided for privately and have been historically. See for instance Bieto et al (2002), which contains a number of examples of this. Here, however, I am taking the more traditional view held by most economists, which assumes that government will provide these goods.

costs. Public goods costs are increasing in the size of the population because it is more expensive to educate a large population, for instance, than a small one. Similarly, *ceteris paribus*, public goods costs will be higher among socially heterogeneous populations than more homogeneous ones (Alesina, Baqir and Easterly 1999). Where agents have more diverse characteristics they have more diverse needs, requiring multiple forms of the same public goods (for instance education offered in different languages), which raises the cost of providing such services.

2.2 The Benefit of Government

The factors above determine *G*'s size. The efficiency of anarchy, however, depends upon the cost of government relative to benefit that government provides by moving society to the higher trade equilibrium. What then affects the size of $H – L$?

The difference between social wealth when individuals engage in higher trade vs. when they engage in lower trade is determined by the potential for gains from exchange. The size of these gains is in turn a function of the range of exchange opportunities that are available to them. Five main factors affect this range:

(1) Individuals' endowments – *Ceteris paribus*, where agents begin with more disparate endowments the gains from trading will be larger and vice versa.

(2) The size of the potential trading population – A larger population of potential exchange partners means a larger number of opportunities to gain from trading. A smaller population means fewer potential gains from exchange.

(3) Individuals' productive abilities – *Ceteris paribus,* where individuals' productive abilities are more disparate there are larger gains from them exchanging. Where productive abilities are more similar the opposite is true.

(4) Individuals' preferences – *Ceteris paribus*, more diverse agent preferences create more opportunities for exchange. Less diverse preferences mean fewer opportunities from exchange.

(5) The presence or absence of informal institutional arrangements that facilitate exchange – Where informal institutions, like arbitration, reputation mechanisms, or community norms compelling cooperation are present, agents are able to realize additional gains from exchange. Thus social wealth in the lower trade equilibrium will be higher than it would have been without these institutions (though because of the limitations discussed above, still lower than if government existed). The presence of informal institutional arrangements facilitating exchange thus shrink the gap between social wealth in the higher and lower trade equilibria. The absence of such institutions increases this gap.

These five factors together determine the thickness of the market. Thick markets have many (i.e., widespread) opportunities for exchange and thus generate high gains from trade. Thin markets, in contrast, have very few opportunities for exchange and thus generate minimal gains from trade.

It should be clear that when markets are sufficiently thin the relative difference in social wealth between a situation in which agents engage in higher trade and a situation in which they engage in lower trade is negligible. This corresponds to the case when $H - L$ is very small. Alternatively, when markets are very thick this difference will be large.

Having established what affects the cost of government and what affects the benefits government provides by moving society from a lower trade equilibrium to a higher trade one, it is now possible to distinguish two types of efficient anarchy: (1) "big G anarchy," in which despite the presence of a substantial gap between social wealth in the higher vs. lower trade equilibrium, government is too costly to justify its emergence, and (2) "small $H – L$ anarchy," in which even though government may be inexpensive to create, the difference between social wealth in the higher and lower trade equilibrium is so small as to make the state inefficient on cost-benefit grounds. At least theoretically then, these are situations in which statelessness is socially optimal. A society of rationally self-interested agents operating in either environment would thus (rationally) choose anarchy over government.

This framework therefore predicts anarchy in two distinct sets of circumstances: one in which the costliness of the state prevents government from emerging (big G anarchy) and one in which the absence of trading opportunities makes the benefit of introducing the state prohibitively small (small $H – L$ anarchy). I explore the evidence supporting this prediction below.

3 Two Archetypes of Actual Anarchy

3.1 Small *H – L* Anarchy

The first archetype of statelessness—small $H – L$ anarchy—is characteristic of statelessness observed in small, primitive societies. The historical presence of long-standing, primitive anarchic societies spans the entire globe. Consider, for example, societies such as the Eskimo tribes of the North American Arctic (Hoebel 1954), Pygmies in Zaire (Turnbull 1961), Indian tribes like the Yoruk of North America (Benson 1989), the Ifugao of the Philippines (Barton

1967), the Massims of East Paupo-Melanesia (Landa 1994), Indian tribes of South America like the Kuikuru (Dole 1966), the Kabyle Berbers of Algeria, the Land Dyaks of Sarawak and the tribal Santals of India (Barclay 1990), none of which had governments. In several cases primitive anarchic societies remained as such well into the 20th century. The Kapauku society of West New Guinea, for instance, was stateless until about 1960 (Pospisil 1963).

In his classic anthropological work, E. E. Evans-Pritchard (1980 [1940]) described the Nuer society of the southern Sudan circa the 1930s. The Nuer people were not alone in pre-colonial Africa in rejecting formal government. Inside Africa, the Barabaig, Dinka, Jie, Karamojong, Turkana, Tiv, Lugbara, Konkomba, Plateau Tonga and others all long stood as stateless or near-anarchic orders as well.[8] The Nuer, however, is among the best studied of these groups and in many ways typifies general features found among other primitive anarchic societies. For this reason I consider the Nuer exclusively here, though it should be kept in mind that the lessons of this analysis apply generally to other primitive anarchic societies with similar characteristics, as I will try and highlight below

Primitive societies like the Nuer represent instances in which rationally self-interested individuals choose anarchy over government because the difference between social wealth in the higher trade and lower trade equilibrium is extremely small. Since the formation of even the leanest government involves some fixed cost and this cost is not insignificant, a very small $H - L$ is enough make anarchy the efficient pattern of social organization.

The small gap between payoffs from higher and lower trade in primitive societies is a function of five main factors, which tend to make potential markets inside of them extremely thin:

[8] For reference to these and other stateless societies in Africa see Bohannan (1968) and Barclay (1990).

(1) These societies are typically rather small, meaning there are relatively few opportunities for exchange even if government is introduced. This tends to make lower levels of trade enabled by informal institutional arrangements not much less profitable than higher levels of trade that would be made possible if government were established. The size of the relevant trading population is largely determined by the size of the population over which government is introduced. Thus to understand why the relevant potential trading population for the Nuer was very small, we need to first understand why government among the Nuer, if it were introduced, would have been introduced at a low level—i.e., over a small population.

The Nuer were actually one the largest primitive stateless societies.[9] The most liberal estimate of the Nuer population is around 400,000 individuals (Barclay 1990). However, Evans-Pritchard who studied the Nuer most closely estimated the Nuer population at only half this size. This figure is inclusive of all Nuer group members. This inclusive population was divided into 11 tribes—the Bul, Leek, western Jikany, Nyuong, Dok, Jagei, Gaawar, Thiang, Lak, Lou, and eastern Jiknay. Each tribe was in turn subdivided into numerous sections based on lineage, and these sections were further subdivided into numerous village communities. Nuer communities tended to be extremely close-knit, as they were composed of individuals connected by lineage.

The largest Nuer political unit was the tribe in which informal rules and arbitration procedures were vaguely respected by other tribe members. Beyond the bounds of each tribe there was no recognition of such rules or procedures. The largest conceivable level at which government might have been introduced among the Nuer would therefore have been the tribal level. Even this, though, is questionable. Evans-Pritchard, for instance, indicates that in many cases the largest effective political unit of the Nuer was actually much smaller, perhaps somewhere between the village and tribal levels. This suggests that were government

[9] To my knowledge, only the Tiv and the Lugbara were larger.

introduced, it would have been over an even smaller population. In any event, the relevant population of the Nuer, which as already noted was considerably larger than many other anarchic primitive societies, was not very large. The presence of informal institutions such as the "leopard-skin chief" who arbitrated disagreements among tribe members enabled some degree of exchange between individuals at this level. While introducing a formal authority at the tribal level would increase this exchange somewhat, the small population involved coupled with informal institutions like the leopard-skin chief suggests that this increase would be minimal.

(2) Individuals in primitive societies typically have very similar productive abilities. Most are either pastoral or horticultural. The Nuer, who were of the pastoral variety, were overwhelmingly a cattle-herding people. Though they were sometimes forced to raise crops (for instance, when rinderpest destroyed their livestock), a combination of the natural environment they found themselves in and Nuer culture created a situation in which there was very little differentiation in agents' productive capacities.

Evans-Pritchard described the fundamental environmental features of Nuerland as follows: "(1) It is dead flat. (2) It has clay soils. (3) It is very thinly and sporadically wooded. (4) It is covered with high grasses in the rains. (5) It is subject to heavy rainfall. (6) It is traversed by large rivers that flood annually. (7) When the rains cease and the rivers fall it is subject to severe draught" (1980: 55). While these conditions allowed for occasional horticulture, hunting and fishing, they overwhelmingly dictated the productive activity of cattle herding that the Nuer were so fond of. Production was thus almost exclusively directed at raising cattle for meat and milk.

Nuer culture, which was from top to bottom organized around the importance of cattle, reinforced herding as the virtually exclusive productive activity of the Nuer people. As Evans-

Pritchard put it: nearly all of Nuer "social behavior directly concerns their cattle" (1980: 18). This fact was manifest in practices and institutions among the Nuer from the giving of names (which were based on the names of family cattle), their networks of kinship ties (which were based upon cattle ownership), to rituals and religious activities. This intensely focused interest on cattle that was fundamental to Nuer culture strengthened the singularly directed aims of Nuer productive activities in herding.[10] Neither this feature of Nuer life nor the fact that the Nuer environment was not suitable for much other than cattle herding is to deny that innately occurring comparative advantage among individuals in say the production of milk vs. the production of meat allowed for some specialization. However, for the reasons discussed above, the degree of this specialization was severely limited. This in turn limited the gains that could be had from higher levels of exchange, which introducing government would bring.

(3) Not always, but frequently, the agents who populate primitive societies have homogeneous preferences. In the case of the Nuer, as mentioned above, this preference was nearly uni-dimensional and aimed at the ownership of cattle. This lack of diversity tended to diminish the increase in exchange opportunities that introducing government could bring. As Evans-Pritchard observed, the "Nuer have nothing to trade except their cattle and have no inclination to dispose of these; all they greatly desire are more cattle . . . This narrow focus of interest causes them to be inattentive to the products of other people, for which, indeed, they feel no need and often enough show contempt" (1980: 88).

(4) Individuals in primitive societies often have very similar endowments. Because they are frequently egalitarian and do not often recognize private ownership beyond the level of direct consumables, these societies create a situation in which across current members and even generations, individuals have the same level and forms of wealth. For the Nuer, while private

[10] The Nuer focus on cattle was both a cause and consequence of the cultural characteristics described.

ownership existed and disparities in wealth levels were permitted, the form of individual endowments was nearly identical for all individuals in that wealth was construed almost exclusively in the form of cattle, which was singularly desired.

(5) Because of their small, close-knit nature, primitive societies are often able to effectively use informal institutional arrangements based on norms and reputation to facilitate cooperation. Within the same communities, for instance, the Nuer shared common norms regarding the settlement of disputes, which typically involved cattle. Disagreeing members would see the leopard-skin chief who, sometimes in conjunction with community elders, would recommend how the dispute should be settled. This form of informal arbitration enabled community interaction despite the absence of formal authority.

Similarly, within the same tribe, the institution of the feud, which involved specific steps for dealing with more serious transgressions, was respected by the Nuer and provided a strong incentive for individuals to refrain from theft and violence.[11] The strong presence of these informal mechanisms of governance raised the relative payoff to individuals in the lower trade equilibrium, which served to shrink the gap between social wealth in this and the higher trade equilibrium, and with it the benefit of introducing a state.

3.2 Big G Anarchy

Anarchy may also be efficient if the cost of government is extremely large. In this case even a substantial gap between social wealth in the higher vs. lower trade equilibrium may not be large enough to make the state efficient from a cost-benefit perspective. In this environment,

[11] For an excellent analysis of the feud and leopard-skin chief as institutions of self-enforcement see Bates (1983).

rationally self-interested agents will again be led to prefer anarchy over government. Big G anarchy is thus the second archetype of statelessness I consider.

Instances of big G anarchy are less prevalent than instances of small $H - L$ anarchy simply because the cases in which G is likely to be massive are also the cases in which government is being extended over a massive population, which means that the potential increase in gains from trading are also massive. It is therefore hard for the cost of government to be larger than the difference between social wealth in the lower vs. higher trade equilibrium.

Nevertheless, one particular instance of big G anarchy is hard to miss: international anarchy. In recent decades there has been some growth of supranational organizations aimed at increasing the degree of formal enforcement in the international sphere. Such organizations include, for instance, the World Court and the United Nations. These organizations, however, have not fundamentally affected the anarchic nature of the international sphere in that none of them give final, ultimate authority to the governing body to offer binding decisions on the parties involved. In short, they do not override national sovereignty but instead rely fundamentally upon the willingness and voluntary consent of the various sovereigns involved. If a sovereign chooses not to appear before such a court or does not abide by the court's decision, there exists no formal authority to compel it do otherwise.

Given the considerable population of the world, the difference between social wealth in the higher and lower trade equilibrium in the international sphere is, at least in principle, very substantial. Precisely because a global state would extend to nearly 6.5 billion people, however, the organizational and enforcement costs of government alone make one world government prohibitively expensive. Consider, for instance, the substantial increase in organizational costs that would result from most voters being far removed from their public representatives (at least at the highest level). Organizational costs would also rise considerably because of the vast increase in the heterogeneity of the relevant population. If it is difficult to arrive at a decision regarding where a new police station is to be located within a community of 20,000 suburbanites, imagine the difficulty of coming to a much larger decision when over a billion people are involved from Beirut to Mexico City. Increased heterogeneity among the relevant population will lead to substantial increases in enforcement and public goods costs for similar reasons. Indeed, as the recent research of Alesina and Spolaore (2003) shows, the attendant increase in such costs associated with extending government over larger and more socially diverse populations is a primary constraint on the effective size of nations. At the size necessary to effectively govern the entire globe, any economies of scale in having a centralized state that normally exist on the national level are overwhelmed by the diseconomies of an encompassing world state.

Like all non-market entities, government also lacks a profit and loss mechanism to govern the allocation of resources internally. The resulting inefficiencies are tolerable when governments are at the national level. Overall it may be cheaper to organize activities internally than to use the market for this purpose. As government grows beyond its optimal size, however, the weight of increasing inefficiencies that stem from organizing activities this way overcome its benefits. In other words, just as such diseconomies limit the optimal size of firms, so too do they limit the optimal size of governments.

Although it relates to the difference between $H - L$ instead of the size of G, it must be noted that the strong presence of informal institutions that facilitate exchange in the international arena also contributes to the efficiency of anarchy in this sphere. Modern-day international trade is based largely on the set informal institutions that governed such exchange when it first emerged on a significant scale in 12th century Medieval Europe. This set of informal institutions is called the *lex mercatoria*, or law merchant.[12]

The law merchant is a complex polycentric system of customary law that arose from the desire of traders in the late 11th century to engage in cross-cultural exchange. In the absence of formal enforcement, this custom-based system relied on private arbitration for resolving disputes. Between the early 12th and late 16th centuries virtually all European trade operated this way with great success.[13] This system enabled large numbers of merchants to expand trade significantly and realize substantial additional gains from international exchange (Milgrom et al 1990).

Contemporary international trade continues to make wide use of private arbitration as a means of settling disputes. Today at least 90 percent of all international trade contracts contain arbitration clauses (Volckart and Mangles 1999; Casella 1996). Among the most notable arbitration organizations that exist for this purpose are the International Chamber of Commerce (ICC), the London Court of International Arbitration (LCIA), the Arbitration Association of the Stockholm Chamber of Commerce, and the American Arbitration Association's International Center for Dispute Resolution (ICDR). In 2001 nearly 1,500 parties from over 115 nations across the globe utilized the services of the ICC alone (ICC Bulletin 2001). The amounts in dispute varied from $50,000 to more than $1 billion with over 60 percent of all disputes involving sums of money between $1 million and $1 billion (ICC Bulletin 2002). Similarly, the ICDR arbitrated a caseload in 2001 worth more than $10 billion involving parties from 63 countries across the globe (ICDR 2002).

[12] For a discussion of the law merchant, both modern and medieval see: Mattli (2001); Volckart and Mangles (1999); Casella (1996); Benson (1989).

[13] 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" (1990: 31).

These arbitration associations rely heavily upon evolved customary law that dictates how exchange disagreements are to be settled and "arbitral awards are most generally promptly and willingly executed by business people" (David 1985: 357). Indeed, virtually "[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). In a study published in 1981, for instance, a survey of international oil traders indicated that over 88 percent of all contracts entered were carried out without dispute. Of the remaining 12 percent, respondents indicated that 76 percent of disputes were arbitrated successfully by private adjudication (Trakman 1983: 53). The world's largest international arbitration association, the ICC, estimates that 90 percent of all its arbitral decisions are complied with voluntarily (Craig et al 2000: 404).

The presence of informal institutional arrangements like private arbitration and reliance upon customary law in the international sphere enables a substantial amount of trade despite the absence of government. Consider for a moment the staggering level of international trade. In 2003 alone, world exports of merchandise and commercial services alone exceeded $9 trillion (WTO 2004). Thus, although without formal enforcement agents may be situated in the lower trade equilibrium, this level of trade is not very low at all and quite possibly not significantly lower than it would be if an agency of formal enforcement were introduced. In conjunction with the fact that the cost of such an agency would be extremely high, this strongly suggests that anarchy is the most efficient way of organizing the international arena. While some attempts have been made to introduce bodies of formal enforcement on the global level, it should therefore not be particularly surprising that global anarchy continues to persist.

4 Concluding Remarks: From Anarchy to Government

The efficiency of anarchy in some primitive stateless societies and on the international level does not mean that statelessness is always or will remain efficient in these areas. If, for example, the members of primitive societies like the Nuer decided to widen their preferences, diversify their productive activities further, be more inclusive of other groups or, what is equivalent, take an interest in interacting with a wider, more diverse population, the thickness of potential markets would grow and with it so too would the gap between social wealth in the higher and lower trade equilibrium. If this gap grows large enough, the introduction of a state will become efficient and thus prove desirable.

Clearly, a significant factor contributing to this process—enlarging the number and range of individuals agents will interact with—is partially endogenous to the presence of government. The establishment of a state will make agents feel more secure in interacting with outsiders and thus increase market thickness, which increases the benefit of having a state in the first place. This does not mean, however, that introducing government in small $H - L$ anarchies would necessarily make government efficient. In addition to the other factors affecting the distance between social wealth in the higher and lower trade equilibrium that are not endogenous to government, agents would need to desire to interact with those outside their relatively small communities.[14] In the case of the Nuer, for instance, it does not seem that this was so.

In other cases, however, it was clearly the case. As Greif (2002) points out, Genoese traders initially employed primarily informal institutions to facilitate trade with one another. At

[14] In addition to this, if the benefits that introducing government creates are not immediate (or at least not completely so), agents will need to be sufficiently forward looking for the state to be profitable to adopt. If agents are sufficiently impatient, or if a significant portion of the benefits from introducing government will only come near the end of (or only after the end of) current inhabitants' lives, government will remain prohibitively costly to merit its introduction. In societies where life spans are not very long, this may present a problem. Short-lived agents will find government too costly to adopt, and their resulting failure to adopt government will in turn contribute to the short life span of the next generation, which will confront the same dilemma.

some point, however, they desired to interact beyond these bounds and understood that formal arrangements were necessary to achieve this. Thus they shifted from reliance upon private, informal institutions of enforcement to state enforcement.

References

Alesina, Alberto. R. Baqir and William Easterly (1999). "Public Goods and Ethnic Divisions," *Quarterly Journal of Economics*, 1234-1284.

Alesina, Alberto, A. Devleeschauwer, William Easterly, S. Kurlat and R. Wacziarg (2003). "Fractionalization," *Journal of Economic Growth*, 155-194.

Alesina, Alberto and Eliana La Ferrara (2002). "Who Trusts Others?," *Journal of Public Economics*, 207-234.

Alesina, Alberto and E. Spolaore (2003). *The Size of Nations*. MA: MIT Press.

Anderson, Terry and Peter Hill (2004). *The Not So Wild, Wild West: Property Rights on the Frontier*. Stanford: Stanford University Press.

Anderson, Terry and Fred McChesney (2003). *Property Rights: Cooperation, Conflict and Law*. Princeton: Princeton University Press.

Barclay, Harold (1990). *People without Government: An Anthropology of Anarchy*. London: Kahn and Averill.

Barton, R.F. (1967). "Procedure Among the Ifugao," in Paul Bohannan, ed., *Law and Warfare*. NY: The Natural History Press.

Bates, Robert, Avner Greif and Smita Singh (2002). "Organizing Violence," *Journal of Conflict Resolution*, 599-628.

Bates, Robert (1983). *Essays on the Political Economy of Central Africa*. Cambridge: Cambridge University Press.

Beito, David, Peter Gordon and Alexander Tabbarok (2002). *The Voluntary City: Choice, Community and Civil Society*. Ann Arbor: University of Michigan Press.

Benson, Bruce (1989). "The Spontaneous Evolution of Commercial Law," *Southern Economic Journal*, 644-661.

Benson, Bruce (1989). "Enforcement of Private Property Rights in Primitive Societies: Law without Government," *Journal of Libertarian Studies*, 1-26.

Benson, Bruce (1990). *The Enterprise of Law*. San Francisco, CA: Pacific Research Institute for Public Policy.

Benson, Bruce (1999a). "To Arbitrate or Litigate: That is the Question," *European Journal of Law and Economics*, 91-151.

Benson, Bruce (1999b). "An Economic Theory of the Evolution of Governance and the Emergence of the State," *Review of Austrian Economics*, 131-160.

Böckstiegal, K-H. (1984). *Arbitration and State Enterprises: A Survey of the National and International State of Law and Practice*. Deventer, Netherlands: Kluwer Law and Taxation Publishers.

Bohannan, Paul (1968). "Stateless Societies," in R. Collins, ed., *Problems in African History*. Englewood Cliffs, NJ: Prentice-Hall.

Buchanan, James (1975). *The Limits of Liberty: Between Anarchy and Leviathan*. Chicago: University of Chicago Press.
Buchanan, James and Geoffrey Brennan (1980). *The Power to Tax*. New York: Cambridge University Press.
Buchanan, James and Gordon Tullock (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.
Casella, Alessandra (1996). "On Market Integration and the Development of Institutions: The Case of International Commercial Arbitration," *European Economic Review*, 155-186.
Clay, K. (1997). "Trade Without Law: Private-Order Institutions in Mexican California, *Journal of Law, Economics, and Organization*, 202-231.
Craig, W.L., William Park and Ian Paulsson (2000). *International Chamber of Commerce Arbitration*. New York: Oceana Publications.
David, R. (1985). *Arbitration in International Trade*. Deventer, The Netherlands: Kluwer Law and Taxation Publishers.
De Soto, Hernando (1989). *The Other Path: The Invisible Revolution in the Third World*. NY: Harper and Row.
Dixit, Avinash (2004). *Lawlessness and Economics: Alternative Modes of Governance*. Princeton: Princeton University Press.
Dixit, Avinash (2003). "Trade Expansion and Contract Enforcement," *Journal of Political Economy*, 1293-1317.
Dole, Gertrude (1966). "Anarchy without Chaos: Alternatives to Political Authority Among the Kuikuru," in Marc Swartz, Victor Turner and Arthur Tuden, eds., *Political Anthropology*. Chicago: Aldine.
Ellickson, Robert (1991). *Order without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press.
Evans-Pritchard, E.E. (1940). *The Nuer*. Oxford: Oxford University Press.
Friedman, David (1973). *The Machinery of Freedom*. Chicago: Open Court Publishing.
Greif, Avner (1989). "Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders," *Journal of Economic History*, 857-882.
Greif, Avner (1993). "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition," *American Economic Review*, 525-548.
Greif, Avner (2002). "Institutions and Impersonal Exchange: From Communal to Individual Responsibility," *Journal of Institutional and Theoretical Economics*, 168-204.
Greif, Avner, Paul Milgrom, and Barry Weingast (1994). "Coordination, Commitment and Enforcement: The Case of the Merchant Guild," *Journal of Political Economy*, 745-776.
Haddock, David (2003). "Force, Threat, Negotiation: The Private Enforcement of Rights," in Terry Anderson and Fred McChesney, eds., *Property Rights: Cooperation, Conflict, and Law*. Princeton: Princeton University Press.
Hirshleifer, Jack (1994). "The Dark Side of the Force," *Economic Inquiry*, 1-10.
Hoebel, E. Adamson (1954). *The Law of Primitive Man*. MA: Harvard University Press.
Holcombe, Randall (2004). "Government: Unnecessary but Inevitable," *Independent Review*, 325-342.
ICC (2002). *International Court of Arbitration Bulletin*, Spring 13(1).
ICC (2001). *International Court of Arbitration Bulletin*, Spring 12(1).

ICDR (2002). *Press Release*.
Klein, Daniel (1992). "Promise Keeping in the Great Society: A Model of Credit Information Sharing," *Economics and Politics*, 117-136.
Landa, Janet (1994). *Trust, Ethnicity, and Identity*. Ann Arbor: University of Michigan Press.
Leeson, Peter (2004). "Cooperation and Conflict: Evidence on Self-Enforcing Arrangements and Heterogeneous Groups," *American Journal of Economics and Sociology*, forthcoming.
Levi, Margaret (1988). *Of Rule and Revenue*. Berkeley: University of California Press.
Libecap, Gary (2003). "Contracting for Property Rights," in Terry Anderson and Fred McChesney, eds., *Property Rights: Cooperation, Conflict, and Law*. Princeton: Princeton University Press.
Mattli, Walter (2001). "Private Justice in a Global Economy: From Litigation to Arbitration," *International Organization*, 919-947.
McGuire, Martin and Mancur Olson (1996). "The Economics of Autocracy and Majority Rule: The Invisible Hand and the Use of Force," *Journal of Economic Literature*, 72-96.
Milgrom, Paul, Douglass North, and Barry Weingast (1990). "The Role of Institutions in the Revival of Trade: the Medieval Law Merchant, Private Judges, and the Champagne Fairs," *Economics and Politics*, 1-23.
North, Douglass (1981). *Structure and Change in Economic History*. New York: WW & Norton Co.
North, Douglass (1990). *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge University Press.
North, Douglass and Robert Thomas (1973). *The Rise of the Western World: A New Economic History*. New York: Cambridge University Press.
Olson, Mancur (1993). "Dictatorship, Democracy, and Development," *American Political Science Review*, 567-576.
Pospisil, Leopold (1963). *The Kapauku Papuans of West New Guinea*. New York: Holt, Rinehart, and Winston.
Rothbard, Murray (1977). *Power and Market: Government and the Economy*. New York: Columbia University Press.
Trakman, Leon E. (1983). *The Law Merchant: The Evolution of Commercial Law*. Littleton, CO: Fred B. Rothman & Co.
Turnbull, Colin (1961). *The Forest People*. NY: Simon and Schuster.
Volckart, Oliver and Antje Mangles (1999). "Are the Roots of the Modern *Lex Mercatoria* Really Medieval?," *Southern Economic Journal*, 427-450.
World Trade Organization (2004). *Recent Trends in International Trade Policy Developments*. Geneva: World Trade Organization.
Zerbe, R. and Anderson, L. (2001). "Culture and Fairness in the Development of Institutions in the California Gold Fields," *Journal of Economic History*, 114-143.