Spring 2014

Opening the Machinery of Private Order: Public International Law as a Form of Private Ordering

Bryan H. Druzin

OPENING THE MACHINERY OF PRIVATE ORDER: PUBLIC INTERNATIONAL LAW AS A FORM OF PRIVATE ORDERING

BRYAN H. DRUZIN*

ABSTRACT

Does legal order always need the enforcement power of the State? The concept of private order says no. Private ordering is traditionally defined as the coming together of non-governmental parties in voluntary, self-enforcing arrangements. This Article radically expands the concept of private order to include not only individuals, but also governments themselves, arguing that the ingredients for private ordering exist in both spheres. State actors, perhaps even more so than individuals, are producers of private order in that they regularly establish sophisticated legal order in the absence of centralized enforcement. The Article constructs a theory of private order which focuses on the unique structural properties of contract, and then applies this to the emergence of public international law, arguing that successful treaty-based law should be thought of as a form of contract-based private ordering—one able to emerge because it assigns ongoing positive obligations between parties thereby facilitating signaling.

* Assistant Professor of Law, The Chinese University of Hong Kong. Some of what is posited here regarding the impact of positive obligations upon systems of self-regulating cooperation evolved from a section of an earlier paper published at Georgetown University. *See* Bryan H. Druzin, *Law Without The State: The Theory Of High Engagement and the Emergence of Spontaneous Legal Order within Commercial Systems*, 41 GEO. J. INT'L L. 559 (2010).

TABLE OF CONTENTS

INTRODUCTION

Does legal order always need the enforcement power of the State? This Article says no. The received wisdom from Hobbes is that contracts "without the sword are but words . . . of no strength."[1] Indeed, this is a very common assumption, but it is not true. The sword is not always necessary. Most contracts are fulfilled without ever having to go to court not because of any threats of force but because they are mutually advantageous.[2] In fact, research shows that the vast majority of business transactions are executed without entering into formal contracts of any kind.[3] This fact gives rise to a very important question: to what extent is the State even necessary to establish legal order?[4] The idea that such order can evolve without the State is sometimes referred to as private ordering—the coming together of non-governmental parties in voluntary, self-enforcing arrangements.[5] Private order, as I define it

---

1. THOMAS HOBBES, LEVIATHAN 125 (A.P. Martinich ed., 2002) (1651).

2. ROBERT S. SUMMERS, LON L. FULLER 81 (1984). Indeed, "Private mechanisms generate some degree of contract compliance." JEFFREY A. MIRON, LIBERTARIANISM FROM A TO Z 70 (2010). *See also* BRUCE L. BENSON, THE ENTERPRISE OF LAW 12 (1990). For some early examinations of self-enforcing agreements, see Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615, 616 (1981); L. G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27, 27 (1980).

3. *See* Stewart Macauley, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 62 (1963); *See also* AVINASH K. DIXIT, LAWLESSNESS AND ECONOMICS 25 (2007); Marc Galanter, *Justice in Many Rooms: Courts, Private Ordering, and Indigenous Law*, 19 J. LEG. PLURALISM 1, 2 (1981).

4. The term legal order is used here to describe any system where parties follow a collectively-recognized set of rules, even where it may not always be in their interests (at least in the short-term) to do so. When the term "law" is used here, it is meant as also encompassing informal regulation—it is law not merely in the formal judicial sense, but also the broad regulatory sense, even without any authoritative pronouncement of these rules or formal enforcement of them. Some may take issue with such a loose definition, but the skeptical reader is urged to read on.

5. The term private ordering is appropriate here in that it has been used in the sense of private enforcement, albeit in slightly different ways. *See, e.g.*, OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM 163–68 (1985) (making the case that repeated play and reputation are 'private ordering' tools for enforcement); Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115, 115 (1992); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation though Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1782 (2001) (using the term "private ordering" to refer to private enforcement). In recent decades, the idea of private ordering has attracted considerable attention in the law and economics literature. Some of the main earlier contributions in this vein include: ROBERT C. ELLICKSON, ORDER WITHOUT LAW 9–11 (1991); Robert D. Cooter, *Inventing Market Property: The Land Courts of Papua New Guinea*, 25 L. & SOC'Y REV. 759, 759 (1991); Avery Katz, *Taking Private Ordering Seriously*, 144 U. PA. L. REV. 1745, 1745 (1996); Alan Schwartz & Robert E. Scott, *The Political Economy of Private Legislatures*, 143 U. PA. L. REV. 595, 597 (1995). For an informative examination of the concept of private ordering and the related literature in economics, see Oliver E. Williamson, *Credible*

here, is any self-sustaining system of legal order that arises in the absence of external coercion. This kind of legal ordering is not promulgated and handed down from above but rather is produced by the participants themselves.[6]

This Article radically expands the definition of private order (probably not without controversy) to include state actors themselves, for they too, perhaps even more so than individuals, are producers of private order in that they regularly establish sophisticated legal order between themselves despite the absence of any reliable third-party enforcement. The idea of private order is thus particularly relevant to the growth of public international law where there is no centralized coercive authority to speak of.[7] Because it lacks a central coercive authority, order, therefore, cannot arise in any sweeping sense by being externally imposed. Indeed, from the perspective of states, the world exists within an arena of anarchy. Public international law is truly an archetype of private ordering—a vast system of legal order created by the participants themselves. In many key respects, the interactions between states mirror the behavior of individuals engaging in systems of private ordering. It makes little difference if the actor in question is an individual or a national government; all that is required is that they act as a single entity. When dealing with other states, national governments meet this criterion. The ingredients for private order therefore exist just as much on the State as on the individual level, and as such, the concept of private order may be applied to the emergence of public international law. Doing so may prove very useful: it can explain how self-sustaining legal order is able to arise between nations despite the absence of any supranational authority capable of enforcing the rules on the international stage. Moreover, it may even suggest a way to possibly bolster the emergence of this order.

Commitments: Using Hostages to Support Exchange, 73 AM. ECON. REV. 519, 520–22 (1983). Steven Schwarcz conceptualizes private ordering as a continuum of governmental participation in rulemaking, with rules adopted entirely by private actors lying at one extreme end of this spectrum. *See* Steven L. Schwarcz, *Private Ordering*, 97 NW. U. L. REV. 319, 324 (2002). *See also* implicit contract theory in economics.

6. My definition here is perhaps more extreme than the conception of private order by many scholars in that my definition does not allow for the imposition of rules through hierarchical coercion on any level, be this a government, a warlord, corporation, or a country club.

7. The United Nations or International Court of Justice (ICJ) is yet to qualitatively meet this criterion. *See* BRETT D. SCHAEFE, CONUNDRUM: THE LIMITS OF THE UNITED NATIONS AND THE SEARCH FOR ALTERNATIVES 31 (2009). For a general discussion along these lines, see DAVID RODIN, WAR AND SELF-DEFENSE 180–81 (2002). ICJ only has jurisdiction with the consent of the parties. Its decisions are binding yet it has no real enforcement power. As such, it is arguably better conceptualized as a form of arbitration rather than a court with genuine enforcement power.

That is precisely what this Article does. This Article constructs a theory of private order[8] (performance signaling theory) based around the unique structural properties of contract. It then applies this to the emergence of public international law to help explain the evolution of stable legal order between governments despite the absence of an external authority capable of enforcing their agreements, arguing that successful treaty-based law should be thought of as a form of contract-based private ordering, one able to emerge primarily because it assigns ongoing positive obligations between the participants (state actors in this case). It has been widely noted that long-term contractual interaction is unique in that it may be self-sustaining[9] even in the absence of third-party coercion.[10] Performance signaling theory posits that this private-

8. The term private order has also been referred to as spontaneous law. Spontaneous legal order is present in any system of order that demonstrates degrees of autonomous rule formation and compliance. The term "spontaneous law," while not widely used, does appear in the literature. For an interesting look at the idea, see Francesco Parisi, *Toward a Theory of Spontaneous Law*, 6 CONST. POL. ECON. 211 (1995). Historically, we can see this kind of self-ordering in the form of the medieval law merchant, and arguably many aspects of this are evident in the *lex mercatoria* as it exists today where a central legislative authority is notably absent. Leon E. Trakman, *From the Medieval Law Merchant to E-Merchant Law*, 53 U. TORONTO L.J. 265, 270 (2003). Another example drawn from history is the *Leges Marchiarum* (the Law of the Marshes), an intricate system of criminal law related to cross-border banditry ("reiving") that emerged in the Anglo-Scottish borderlands from the thirteenth to sixteenth century, which regulated cross-border "criminal" conduct, such as falsely declaring the value of a stolen good. *See* Peter T. Leeson, *The Laws of Lawlessness*, 38 J. LEGAL STUD. 471, 482 (2009).

9. The ability of long-term contracts to reduce opportunism and sustain stable partnerships has been noted by many scholars and linked to the idea that they are essentially repeated games. *See, e.g.*, ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 225–36 (4th ed. 2004); GARY J. MILLER, MANAGERIAL DILEMMAS 3 (1995); JAMES D. MORROW, GAME THEORY FOR POLITICAL SCIENTISTS 260–314 (1994); Gary S. Becker & George J. Stigler, *Law Enforcement, Malfeasance, and Compensation of Enforcers*, 3 J. LEGAL STUD. 1 (1974); B. Douglas Bernheim & Debraj Ray, *Collective Dynamic Consistency in Repeated Games*, 1 GAMES & ECON. BEHAV. 295, 296 (1989); Joseph Farrell & Eric Maskin, *Renegotiation in Repeated Games*, 1 GAMES & ECON. BEHAV. 327 (1989); Telser, *supra* note 2, at 27.

10. One example drawn from history is that of late nineteenth-century commercial contract law in Taiwan where the state enforcement of contracts was absent yet nevertheless remained highly functional. *See* ROSSER H. BROCKMAN, *Commercial Contract Law in Late Nineteenth-Century Taiwan*, *in* ESSAYS ON CHINA'S LEGAL TRADITION 76, 77, 81 (Jerome Alan Cohen et al. eds., 1980). *See also* Peter Leeson, *How Important Is State Enforcement for Trade?* 10 AM. L. & ECON. REV. 61, 61 (2008) (critically examining the position that state-provided contract enforcement is critical to trade); Peter T. Leeson, *Social Distance and Self-Enforcing Exchange*, 37 J. LEGAL STUD. 161, 162 (2008) (examining the idea that ex ante signaling can make widespread trade self-enforcing). This is not to deny that formal enforcement remains a more effective way to ensure compliance—promises are clearly more secure with a vigorous enforcement regime in place; however, legal order may indeed be sustained without the iron hand of the state. While there is an important role for the State to play in protecting and enforcing basic property rights, the State's role in contract may be radically minimal compared with other areas of law. *See* DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE, AND ECONOMIC

ordering potential is implicitly related to the legal makeup of contracts—specifically, it is bound up with the particular kind of legal obligations they engender. Let me explain.

Broadly defined, legal obligations come in either one of two forms.[11] By far, the vast majority of legal obligations are framed in the negative: one shall not infringe upon the property rights of the man who lives next to you; one shall not wantonly assault other people, and so on and so forth.[12] These acts are what we must refrain from doing. They oblige inaction. Most do not relate to specific individuals but rather apply to all members of the public generally—they are owed to everyone.[13] However, legal obligations also come in a second, albeit less common form.[14] These are positive duties owed to specific individuals,[15] positive obligations that require one to perform some overt act or another—that is, what we are obliged to do. I call the first kind of legal obligation *negative obligations* and the second *positive obligations*.[16] This

---

PERFORMANCE 52 (1990) (discussing the vital role of public institutions in the reliable enforcement of property rights and contracts in the promotion of economic growth). *See also* Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1997). This brand of legal minimalism forms the core of the nineteenth-century *laissez-faire* view of contract law. The notion of legal minimalism is especially prevalent among those of a libertarian bent. *See*, *e.g.*, ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 26 (1974) (setting forth the classical libertarian view of the minimalist state).

11. SIR FREDERICK POLLOCK, A FIRST BOOK OF JURISPRUDENCE FOR STUDENTS OF THE COMMON LAW 56–57 (1896).

12. JOHN FORGE, THE RESPONSIBLE SCIENTIST 236 (2008).

13. PATRICIA SMITH, LIBERALISM AND AFFIRMATIVE OBLIGATION 8 (1998).

14. JEAN JACQUES DU PLESSIS ET AL., PRINCIPLES OF CONTEMPORARY CORPORATE GOVERNANCE 355 (2005) ("[T]here are very few positive moral obligations imposed on us. This is also the case as far as the law is concerned. Thus it is rare that individuals are required to positively do an act (as opposed to refraining from engaging in conduct) . . . .").

15. Some positive duties are not owed to specific individuals. For example, the legal obligation to pay one's taxes or the obligation to scoop up after one's dog in the park. However, the vast majority of positive legal obligations are owed to a particular party. It is this kind of positive duty that is meant here. In contracts, positive obligations always come in this form.

16. Two important points should be made here. First, when the term positive obligation is used henceforth, it is meant to connote obligations owed to specific parties. Second, the present notion of positive and negative obligations should not be confused with the concept of a positive duty of care. A positive obligation is different than a positive duty of care in that it always requires an overt act. A positive duty of care owed to another may not always require that an action be performed. For example, if we say that an employer owes a positive duty of care to his employees to provide safe working conditions, this may or may not be a positive obligation as it is meant here. This is very much situational: if in order to satisfy this duty the employer must actively perform something (for example, have ice removed daily from the loading dock) then it is a positive obligation because it demands some overt action to be taken. If, however, the employer need only, for example, not douse the loading dock with water on a cold day, then this is not a positive obligation; it is a negative obligation because it requires inaction as opposed to

second brand of legal obligation is special[17] because the overt performance of an act creates a clear and discrete signal of cooperation and this maximizes the potential for private ordering in that it allows parties to repeatedly signal their commitment to long-term cooperation.[18] This is not the case with the absence of an action: ongoing negative obligations, which require only inaction, do not provide any signaling opportunity. In fact, they prevent them.

In the context of game theory this ability to signal is key because it helps solve the prisoner's dilemma (a fundamental barrier to cooperation where external enforcement mechanisms are lacking) by generating, through repeated signaling, what I term *signal-induced trust*. Signal-induced trust is trust that arises between two parties from the successful and repeated communication of their mutual intention to cooperate. The distinction between negative and positive obligations is therefore critical because it affects the ability to signal. Ongoing positive obligations allow for clear and frequent cooperation signaling and this has implications for private ordering on all levels: from the interactions of individuals to that of national governments. Here we have the building blocks for a theory that may help explain the emergence of public international law. Given sufficient signaling, contracts between individuals can sustain themselves through signal-induced trust, and in precisely the same fashion, given sufficient signaling, treaties between nations can sustain themselves through signal-induced trust.[19] While the focus here is on the emergence of public international law, the reader should note that the theory could just as readily be applied to the emergence of international legal order between private actors, most notably commercial parties. Indeed, international commerce now constitutes between twenty and twenty-five percent of the world's entire gross domestic product (GDP)—an impressive system of private

---

action. The focus here is simply the nature of what is demanded: action or inaction. Negative obligations demand inaction; positive obligations require action. This distinction is important, as it also avoids the conceptual confusion that surrounds the idea of omissions and affirmative duties. *See infra* note 17.

17. The distinction drawn here between positive and negative obligations should not be confused with acts and omissions. An act is the performance of a proscribed behavior; an omission is the non-performance of a prescribed behavior. The difference between positive and negative obligations, rather, is that one requires inaction (negative obligations) and the other demands action (positive obligations).

18. Signaling has been widely studied in economics within the area of contract theory. *See infra* note 50.

19. For some interesting work regarding signaling between States in a much broader sense, see ROBERT JERVIS, THE LOGIC OF IMAGES IN INTERNATIONAL RELATIONS (1989) (analyzing state relations in terms of communications consisting of signals and indices: indices being "statements or actions that carry some inherent evidence that the image projected is correct because they are believed to be inextricably linked to the actor's capabilities or intentions.").

ordering that exists, like public international law, largely within a state of technical anarchy.[20]

The Article is divided into three parts. Part I discusses the notion of private ordering. It then examines the prisoner's dilemma, how it is solved by repeated interaction, and the emergence of signal-induced trust. Part II fleshes out the details of performance signaling theory, examining how exactly positive obligations facilitate private ordering. After laying this crucial groundwork, the final section, Part III, then explores at length the implications that flow from this theory for the past and future growth of public international law. Performance signaling theory may prove extremely valuable as a public international law theory. Empirical research would go far in bolstering the theory's claims. Such research is invited. The goal here, however, is to merely lay out the broad strokes of the theory. The task before us is to articulate a general thesis that may contribute to our understanding of how private ordering emerges on all levels, from the private ordering of individual actors to that of nation-states—to open, that is, the machinery of private order and peer inside.

I. THE POSSIBILITY OF PRIVATE ORDER, THE PRISONER'S DILEMMA, AND REPEATED INTERACTION

A. The Possibility of Private Order

Jeremy Bentham asserted that "[p]roperty and [state] law are born and must die together. Before the laws, there was no property: take away the laws, all property ceases."[21] This *legal centrist*[22] belief has become so ingrained in the popular imagination that the position has become almost axiomatic—almost unassailable in its legitimacy. But it is not true. Game theorists, libertarians, anarchists, and law and economic scholars alike all postulate that law may evolve and function in the absence of the State.[23] As Robert Cooter

20. Peter T. Leeson, *Anarchy Unbound: How Much Order Can Spontaneous Order Create?*, *in* HANDBOOK ON CONTEMPORARY AUSTRIAN ECONOMICS 136, 141 (Peter J. Boettke ed., 2010).

21. JEREMY BENTHAM & JOHN BOWRING, 1 THE WORKS OF JEREMY BENTHAM 309 (1838).

22. For an overview of the concept of legal centrism including evidence that refutes this belief, see ELLICKSON, *supra* note 5, at 138–47.

23. While not a comprehensive list of scholars that deal in this concept, see ELLICKSON, *supra* note 5, at 139; F. A. HAYEK, 1 LAW, LEGISLATION AND LIBERTY 72 (1973); Bruce L. Benson, *Customary Law with Private Means of Resolving Disputes and Dispensing Justice: A Description of a Modern System of Law and Order Without State Coercion*, 9 J. LIBERTARIAN STUD. 25 (1990); Bruce L. Benson, *Enforcement of Private Property Rights in Primitive Societies: Law without Government*, 9 J. LIBERTARIAN STUD. 1 (1989); Bernstein, *supra* note 5, at 115; Karen Clay, *Trade without Law: Private-Order Institutions in Mexican California*, 13 J.L. ECON. & ORG. 202 (1997); Robert D. Cooter, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law*, 14 INT'L REV. L. & ECON. 215, 216 (1994); Robert C. Ellickson, *The Aim of Order Without Law*, 150 J. INSTITUTIONAL & THEORETICAL ECON. 97, 97 (1994); Avner Greif, *Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi*

explains, "Rather than proceeding from top to bottom, lawmaking can proceed from bottom to top."[24] Yet this idea stands in stark contrast to the prevailing view that law is to be conceived of in terms of external coercion. That this view is so pervasive is completely understandable, however. Indeed, the idea of self-enforcing legal order seems almost counter-intuitive, almost a contradiction. Is not the hallmark of legal order enforcement? Is the State not needed to prop up law? The question inevitably arises: If we remove external enforcement, how can order sustain itself? How will it not simply succumb to the stain of human self-interest and topple in on itself like a house of well-intentioned cards?

There is an answer. In a Hobbesian state of nature where there is no clear external authority to enforce agreements mutual self-interest can sustain cooperation.[25] In place of external enforcement, Lon Fuller opines, it falls upon sheer self-interest to foster a recognition and protection of rights.[26] In game theory speak: cooperation is not a zero-sum game.[27] One party's benefit does not have to come at the expense of the other party. Mutual benefit is possible. For example, every driver recognizes that there is a mutual benefit to be gleaned from a convention that requires everyone to drive on a specific side of the highway.[28] This reciprocal gain is enough to ensure norm compliance—it is mostly self-enforcing.[29] There is hardly a need for authorities to rigorously enforce right- or left-hand drive.

B. The Fatal Flaw: The Prisoner's Dilemma

However, the problem arises in situations where this symmetry of interests breaks down and the incentive structure becomes skewed, specifically where a prisoner's dilemma scenario emerges.[30] In a prisoner's dilemma, the fear of

---

Traders, 49 J. ECON. HIST. 857 (1989); Rachel E. Kranton, *Reciprocal Exchange: A Self-Sustaining System*, 86 AM. ECON. REV. 830 (1996); Paul R. Milgrom et al., *The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs*, 2 ECON. & POL. 1 (1990). *See also* DAVID FRIEDMAN, THE MACHINERY OF FREEDOM 159 (2d ed. 1995); MURRAY N. ROTHBARD, 1 MAN ECONOMY, AND STATE 77 (1962).

24. Cooter, *supra* note 23, at 215.

25. JOHN M. ALEXANDER, CAPABILITIES AND SOCIAL JUSTICE 47 (2008).

26. *See* LON L. FULLER, THE MORALITY OF LAW 28 (1967).

27. For an interesting discussion of non-zero-sum games in relation to situations of conflict, see ANATOL RAPOPORT, THE ORIGINS OF VIOLENCE 518–19 (1989).

28. I borrow this example from ELLICKSON, *supra* note 5, at 159.

29. *See* Bruce L. Benson, *The Spontaneous Evolution of Commercial Law*, 55 S. ECON. J. 644, 646 (1989).

30. For the reader unfamiliar with game theory, McAdams provides a nice summary of the prisoner's dilemma:

> [T]wo prisoners, *A* and *B*, are suspected of committing a crime together. If neither confesses, each knows they will each be convicted of a lesser offense and serve (say) three years in prison. The prosecutor then offers each the following deal, and each knows

betrayal causes cooperation to unravel even where cooperation is advantageous to both parties.[31] The prisoner's dilemma is canonical in the game theory literature, as it represents a seemingly intractable barrier to cooperation in situations where there is no third-party enforcement. It is much studied because this dynamic comes up in a great many situations that have the potential for mutually beneficial cooperation but falter due to this incentive structure, from pairs of individuals to countries.[32] The problem is one of trust. The ever-present specter of the other side cheating undermines the possibility of cooperation. In the prisoner's dilemma the two players can either cooperate or defect; the dilemma is that while cooperating provides mutual benefit, no matter what the other does, the selfish choice of defection is always the smartest move.[33] If the other player does not betray you, you gain the most by betraying them; if the other player does betray you, then you can mitigate this by also betraying them. Either way defection is the dominant strategy over cooperation, forming an equilibrium of non-cooperation (for rational actors).[34] The stain of human selfishness sabotages cooperation. This "dilemma" represents a significant obstacle where there is no third-party enforcement.[35] Without the sword, it is difficult for the parties to trust each other and cooperation breaks down.

There is a certain irony to the prisoner's dilemma. In the prisoner's dilemma, confessing is the dominant strategy because it is the best strategy no matter what the other prisoner does.[36] However, the reasoning is the same for both sides, so both end up defecting, leading to a worse outcome than if they

---

> it is offered to the other: If you confess and the other does not, we will let you off with only one year in prison; if the other confesses and you do not, we will punish you with ten years in prison; if you both confess, you both will serve five years in prison. Confessing is the dominant strategy because it is the best strategy no matter what the other prisoner does. From *A*'s perspective, if *B* confesses, *A* is better off confessing and getting five years instead of ten; if *B* does not confess, *A* is better off confessing and getting one year instead of three. The reasoning is the same for *B*.

Richard H. McAdams, *Signaling Discount Rates: Law, Norms, and Economic Methodology*, 110 YALE L.J. 625, 628 n.13 (2001). The irony is that because both confess, both actors do worse than if they had just cooperated and kept silent. The prisoner's dilemma is discussed in detail below.

31. Robert Axelrod & William D. Hamilton, *The Evolution of Cooperation*, 211 SCI. 1390, 1391 (1981).

32. Miranda Mowbray, *Observable Instability for the Repeated Prisoner's Dilemma*, *in* APPROXIMATION, OPTIMIZATION AND MATHEMATICAL ECONOMICS 223, 223 (Marc Lassonde ed., 2001).

33. Axelrod & Hamilton, *supra* note 31, at 1391 ("[T]wo individuals can each either cooperate or defect. . . . No matter what the other does, the selfish choice of defection yields a higher payoff than cooperation.").

34. *See id.*

35. Williamson, *supra* note 5, at 519, 537.

36. MARIA MOSCHANDREAS, BUSINESS ECONOMICS 172 (2d ed. 2000).

had just cooperated.[37] Even if both parties want to cooperate, by the diktat of rationality, they cannot. It becomes a race to betray the other person first—a race to the bottom.[38] For purely amoral rational actors in an isolated interaction there is no escape from this.[39] Even two angels will be forced to become devils because they cannot risk trusting the other: the situation is such that it compels the parties into cheating because neither side can risk being the sucker.[40] They cannot trust each other and so in their attempt to win, both parties lose. So where does that leave us? In a pickle it would seem, forever doomed to slip endlessly into mutually destructive conflict. But this is of course not what happens. Cooperation can emerge even in prisoner's dilemma type situations, and indeed it emerges all the time.

C. The Solution: Repetition

The well-known solution to this dilemma, of course, is to make the situation an iterated game—that is, to repeat it.[41] In an iterated prisoner's dilemma, the value of repeated cooperation can offset short-term gain and prevent defection. This is because players want to keep the relationship going and cheating the other player in the present round will jeopardize this continuity by invoking retaliation.[42]

1. Threat-induced Trust

To illustrate this with a simple example: if by betraying me today you could earn ten dollars (but I will cease cooperating with you), or earn one

---

37. *Id.*

38. As Axelrod and Hamilton write, "With two individuals destined never to meet again, the only strategy that can be called a solution to the game is to defect always despite the seemingly paradoxical outcome that both do worse [when they both defect] than they could have had they cooperated." Axelrod & Hamilton, *supra* note 31, at 1391.

39. GEORGE J. MAILATH & LARRY SAMUELSON, REPEATED GAMES AND REPUTATIONS 3 (2006). In the case of prisoner's dilemma games "played only once, no strategy can invade the strategy of pure defection. . . . [T]o defect always is an evolutionarily stable strategy." Axelrod & Hamilton, *supra* note 31, at 1392.

40. The prisoner's dilemma dynamic is in fact the reason that plea bargaining is forbidden in many jurisdictions, as it can potentially compel innocent parties to confess to crimes they did not commit. For a good discussion of this, see Oren Bar-Gill & Omri Ben-Shahar, *The Prisoners' (Plea Bargain) Dilemma*, 1 J. LEGAL ANALYSIS 737 (2009).

41. Much of the game theory literature addresses the principle of repeated interaction in the context of iterated games. I refer the reader to the foundational work regarding this idea. *See* ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984); Axelrod & Hamilton, *supra* note 31, at 1391. *See also* ELINOR OSTROM, GOVERNING THE COMMONS (James E. Alt & Douglass C. North eds., 1990); Drew Fudenberg & Eric Maskin, *The Folk Theorem in Repeated Games with Discounting or with Incomplete Information*, 54 ECONOMETRICA 533 (1986). For a good overview of this idea, see ELLICKSON, *supra* note 5, at 164.

42. AXELROD, *supra* note 41, at 126.

hundred dollars by cooperating with me for a week, rationality dictates that it is the optimum strategy to cooperate; by not doing so would rob yourself of ninety dollars. Importantly, because I know that you know this, I can therefore trust you today.[43] And equally important, the same goes for you. This assurance of cooperation thus diffuses the self-destructive trap at the heart of the prisoner's dilemma—the fear of betrayal. The force of self-interest instead flows towards cooperation. The trust that arises between two commercial parties is not really trust in the generic sense—it is that both parties "trust" that the other party has determined that long-term cooperation is in their own self-interest. It is what I call *rational trust*.[44]

If the game comprises many periods of play, conditional cooperation can thus emerge. This principle is an axiom among game theorists: "One-shot encounters encourage defection; frequent repetition encourages cooperation."[45] Rule compliance is assured in a far more reliable way: not through the threat of external coercion by a government, but by the force of self-interest. Repeated dealings, or even the potential for repeated interaction, can thus generate stable cooperation strategies between parties.[46] In each period of play, players can respond to what occurred in the previous period. Repeated interactions thus allow for the emergence of what game theorists call conditional cooperation.[47] The threat of retaliation ensures long-term cooperation by simply negating the incentive to cheat in the short term. Rational trust may emerge as a result.

2. Signal-Induced Trust

This is not, however, the only form of rational trust that can arise between two players facing a prisoner's dilemma. Above is an example of what I will call *threat-induced trust*: both parties trust that the other will comply because of the threat of retaliation by the other player. This is the standard explanation of how the prisoner's dilemma is solved. The dilemma in the prisoner's dilemma is a mutual lack of trust that drives otherwise cooperative parties to cheat, creating a worse outcome. The solution is for both parties to gain sufficient confidence that the other party will not cheat; that is, that they have long-term time horizons and value long-term cooperation over short-term gain. The threat of retaliation provides this confidence. However, confidence that the

43. GOVERNANCE AND INFORMATION TECHNOLOGY 69 (Viktor Mayer-Schönberger & David Lazer eds., 2007) ("Repeated interactions allow reciprocity, and thus trust, to emerge.").

44. Where the term "trust" is used henceforth, it is meant in this sense.

45. MATT RIDLEY, THE ORIGINS OF VIRTUE 65 (1996).

46. STEVEN A. HETCHER, NORMS IN A WIRED WORLD 254 (2004).

47. *See* GOVERNANCE AND INFORMATION TECHNOLOGY, *supra* note 43, at 63 (discussing the conditional cooperation strategy of Tit-for-Tat). *See also* Ernst Fehr & Urs Fischbacher, *Social Norms and Human Cooperation*, 8 TRENDS IN COGNITIVE SCI. 185, 186 (2004) (presenting a nice overview of the norm of conditional cooperation).

other party will not cheat can arise another way as well, also as the consequence of repeated interactions.

This is in the form of signal-induced trust.[48] This is a less Machiavellian form of trust that arises slowly as the result of many rounds of the other party signaling that they have an interest in sustaining a long-term relationship than in cheating.[49] Beyond providing an opportunity for retaliation, an iterated game provides an opportunity for communication, allowing each player to decipher the strategy of the other player.[50] This knowledge arises simply from repeated experience with the other player as the parties signal their intentions to one another through their behavior. Signal-induced trust emerges after many periods of interaction—the more frequent the signaling, the more likely its emergence. So long as the parties repeatedly interact, they will invariably communicate their time horizons.[51] The more times the parties run through discrete cycles of cooperation without incident, the more they signal and the

48. Signal-induced trust is ultimately founded upon the threat that future rounds of cooperation will be lost if one cheats. However, it is distinct from threat-induced trust in that once the other party's strategy is confirmed there is no need to keep the ever-present threat of immediate retaliation. This allows for a greater degree of flexibility and sophistication in terms of cooperation.

49. Positive obligations by their very structural nature allow for signaling. The role of signaling has been extensively studied in economics. *See* In-Koo Cho & David M. Kreps, *Signaling Games and Stable Equilibria*, 102 Q. J. ECON. 179 (1987). For a good overview of signaling games in relation to the prisoner's dilemma, see PRAJIT K. DUTTA, STRATEGIES AND GAMES 383–402 (1999). The impact of signaling may of course be increased if it is costly—a dynamic known in both economics and biology as costly signaling, the basis of costly signaling theory (CST). While itself an important feature capable of inducing cooperation, costly signaling is not brought into the present analysis (though it could very well be). For CST's economic embodiment, see the foundational piece Michael Spence, *Job Market Signaling*, 87 Q. J. ECON. 355 (1973). I provide a comprehensive overview of CST elsewhere; *see* Bryan Druzin, *Law, Selfishness, and Signals: An Expansion of Posner's Signaling Theory of Social Norms*, 24 CAN. J.L. & JURISPRUDENCE 5, 26–27 (2011). The role of signaling in repeated games has been comprehensively studied both empirically and theoretically. UNCERTAINTY AND RISK 280 (Mohammed Abdellaoui et al. eds., 2007). For a good summary of the work on signaling in the economics literature, see DAVID M. KREPS, A COURSE IN MICROECONOMIC THEORY 645–54 (1990).

50. GRAHAM KENDALL ET AL., THE ITERATED PRISONERS' DILEMMA (2007) (outlining the importance of communication for producing cooperation).

51. That is, if they have long-term cooperation in mind. It might be argued that confidence in the other party's time horizons would not develop because cooperation is merely a response to the threat of retaliation and not a genuine expression of the actor's commitment to long-term cooperation. However, this is not the case. The actors' time horizons will become clearer as situations invariably arise where retaliation is not viable and yet the other party complies, or where one party chooses to forego retaliation (that is, tit-for-tat with forgiveness) thereby expressing their commitment to long-term cooperation. The parties can intentionally test the other party in this fashion, giving them small opportunities to cheat etc. So long as the parties repeatedly interact, signaling is bound to emerge.

more they can reasonably have confidence that the other's strategy is long-term cooperation and not short-term cheating.

While the standard analysis of the prisoner's dilemma rightfully focuses on the importance of retaliation in the case of defection, this does not provide a complete picture. The dilemma in the prisoner's dilemma is just one of trust, or the lack of it to be more precise. If both parties can be reasonably confident the other will, like them, not cheat, then they can then risk cooperating. While trust that the other actor will comply can be achieved through threat-induced trust,[52] trust can also be achieved by ascertaining that the other party genuinely has long-term time horizons and will therefore not be baited into betrayal—signal-induced form of trust (indeed, this is closer to the more conventional understanding of "trust"). This second kind of trust is the product of repeated signaling and arises when both parties' interest in long-term cooperation has been reliably inferred through frequent and repeated interactions, so much so that the threat of immediate retaliation can be relaxed—one's guard can be gradually lowered. Trust arises from familiarity with the other party's strategy rather than from the crude threat of retaliation. In the case of threat-induced trust and signal-induced trust, both parties are placed in the same position: they have an ex ante basis for trust, and this solves the prisoner's dilemma.

It is well accepted that communication generally induces greater cooperative behavior between actors.[53] Indeed, this is in fact the way the cooperative relationships of long-term commercial contracts typically unfold: first, conditional cooperation emerges based on a rudimentary form of threat-induced trust, but then over a period of doing business with each other, this gradually evolves into signal-induced trust. Thus, for example, international shipping contracts typically begin with letter of credit terms only to later evolve into open account terms after sufficient signaling has occurred.[54] Trust emerges from repeated cycles of interaction. Indeed, signal-induced trust is far closer to how we conventionally think of trust. It is closer to the trust that arises between individuals who have known each other on a personal level over many years, having repeatedly interacted with each other and thus deciphered the other's time horizons.

---

52. This form of "trust" can be achieved through private retaliation where there is repeated play, or through the threat of state sanctions where there is not.

53. *See, e.g.*, Chester A. Insko et al., *Individual-Group Discontinuity: The Role of a Consensus Rule*, 24 J. EXPERIMENTAL SOC. PSYCHOL. 505 (1988); John M. Orbell et al., *Explaining Discussion-Induced Cooperation*, 54 J. PERSONALITY & SOC. PSYCHOL. 811 (1988). Masaki Aoyagi and Guillaume Fréchette show that in infinitely repeated prisoner's dilemma games with imperfect public monitoring, the level of cooperation increases with the quality of the public signal. Masaki Aoyagi & Guillaume Fréchette, *Collusion as Public Monitoring Becomes Noisy: Experimental Evidence*, 144 J. ECON. THEORY 1135 (2009). See also generally the concept of "noise" in the economics literature.

54. MAURICE D. LEVI, INTERNATIONAL FINANCE 463 (4th ed. 2005).

While signal-induced trust is still firmly rooted in self-interest and the underlying threat of losing a cooperative partner,[55] it is distinct from threat-induced trust in that once the other party's strategy is confirmed, there is less need for the ever-present threat of immediate retaliation and this therefore allows for a far greater flexibility and, crucially, more robust, sophisticated forms of cooperation. The difference is analogous to two strangers performing a cooperative act while pointing guns at each other's heads and two people in a boat sailing together across an ocean. The threat of immediate retaliation is no longer needed because it is clear they have a reliable partnership—both parties have, through repeated signaling, successfully communicated their interest in long-term cooperation. They "trust" each other, or more precisely, they trust they know the other side's strategy is one of sustained cooperation. It is a much slower evolution that strengthens over time through repeated interactions with the same party, but that once arisen can be even more effective in giving rise to further cooperative order, as opportunities for perfect retaliation are not always practical or reliably available. Because of the imperfect nature of retaliation, trust that the other party feels that cooperation is in their own interest is actually a safer bet. In fact, successful long-term contractual relationships often end up relying more on signal-induced trust than on threat-induced trust. Signal-induced trust versus threat-induced trust is a useful distinction to draw, as it requires slightly different conditions to arise, and once arisen, provides a different (greater) benefit.

Signal-induced trust often grows out gradually from threat-induced trust (though this need not always be the case). Because signal-induced trust can only emerge after a period of sustained, frequently repeated interactions, the two kinds of trust are often sequential: the early stages of a cooperative relationship are marked by a cautious threat-induced trust; however, after a period of reasonable stability, signal-induced trust may emerge based on a growing confidence in the cooperative intentions of the other actor—that is, that they have long-term time horizons. However, signal-induced trust may also emerge without threat-induced trust. This is possible if the parties begin by taking small, calculated risks of trust in the initial period and gradually build up their cooperative relationship as signal-induced trust emerges. This is precisely the function of acts of good faith in contract. In the initial rounds, parties can avoid the prisoner's dilemma and risk taking a leap of faith if the consequences of defection are relatively minor. The stakes can then be increased as signal-induced trust builds. Indeed, the above example of international shipping contracts is in fact more in line with this model, as the opportunity for retaliation in the initial round, even where employing documentary credit, is not foolproof. In this fashion, baby steps of trust with

55. But perhaps this is also true of personal relationships.

limited risk can, through signaling, evolve into a stable relationship. Because relationships based upon signal-induced trust have the advantage of far greater flexibility and, importantly, a reduced need to depend upon the constant threat of retaliation, it is indeed a powerful engine for private ordering.

In contrast to negative obligations, positive obligations foster cooperation in that they naturally facilitate signaling and thus solve the prisoner's dilemma by producing signal-induced trust.[56] The section that follows will examine how exactly this occurs, mapping out the theoretical heart of performance signaling theory.

II. PERFORMANCE SIGNALING THEORY: HOW POSITIVE LEGAL OBLIGATIONS FACILITATE PRIVATE ORDERING

A. Distinguishing Between Positive and Negative Obligations

Any situation that is mutually advantageous and where there is sufficient repetition between the same players can generate private order.[57] We often see this ordering in the case of small homogenous groups.[58] This is because a small group is essentially an iterated game in that it allows for repeated interactions with the same players.[59] This repetition can generate rational trust—both threat-induced and signal-induced. Indeed, tight-knit small communities demonstrate high levels of signal-induced trust; threat-induced trust is really of secondary importance. Players know who are and who are not long-term cooperators. However, as group size increases, and there is less or no repeated interaction, the possibility of any kind of trust fades, both threat-induced and

56. Trust solves a wide variety of games, the prisoner's dilemma being but one of these. However, the prisoner's dilemma is the focus here, as it pinpoints the problem underlying human cooperation (a lack of trust) along with its solution. KEN BINMORE, RATIONAL DECISIONS 27 (Richard Blundell ed., 2009).

57. GOVERNANCE AND INFORMATION TECHNOLOGY, *supra* note 43, at 65; LEADING EDGES IN SOCIAL AND BEHAVIORAL SCIENCE 222 (R. Duncan Luce et al. eds., 1989).

58. This has been written on extensively. *See* ELLICKSON, *supra* note 5; Bernstein, *supra* note 5; Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996); Clay, *supra* note 23; David Friedman, *Private Creation and Enforcement of Law: A Historical Case*, 8 J. LEGAL STUD. 399 (1979); Greif, *supra* note 23; Janet T. Landa, *A Theory of the Ethnically Homogenous Middleman Group: An Institutional Alternative to Contract Law*, 10 J. LEGAL STUD. 349 (1981); Richard O. Zerbe Jr. & C. Leigh Anderson, *Culture and Fairness in the Development of Institutions in the California Gold Fields*, 61 J. ECON. HIST. 114 (2001).

59. There is also the element of reputational costs in small groups; however, this is not dealt with directly here. The effectiveness of any repeated game, however, is in fact based upon reputation even if this is only in the limited sense of one's reputation from preceding rounds of play. Reputational costs can be thought of as a form of vicarious retaliation.

signal-induced.[60] This is because in very large N-person prisoner's dilemmas,[61] actors turn into one-shot players, precluding both retaliation and signaling,[62] and so state-enforced law is necessary to change the incentive structure and prevent cheating.

As pointed out, based on whether they require action or inaction, we can distinguish between two types of legal obligations: negative and positive obligations.[63] Between these two, ongoing positive obligations are unique

60. ROBERT BOYD & PETER J. RICHERSON, THE ORIGIN AND EVOLUTION OF CULTURES 146 (2005); Andreas Diekmann & Klaus Manhart, *Cooperation in 2- and N-Person Prisoner's Dilemma Games: A Simulation Study*, 11 ANALYSE & KRITIK 134, 134 (1989) (translated version available at http://www.klaus-manhart.de/mediapool/28/284587/data/07-nperson-pd.pdf). Indeed, group size has been an important feature of game theory research and one that has been much studied. Research shows that cooperation decreases in large groups. *See* David De Cremer & Geoffrey J. Leonardelli, *Cooperation in Social Dilemmas and the Need to Belong: The Moderating Effect of Group Size*, 7 GROUP DYNAMICS: THEORY RES. & PRAC. 168 (2003); Norbert L. Kerr, *Illusions of Efficacy: The Effects of Group Size on Perceived Efficacy in Social Dilemmas*, 25 J. EXPERIMENTAL SOC. PSYCHOL. 287 (1989); Wim B.G. Liebrand, *The Effect of Social Motives, Communication and Group Size on Behaviour in an N-person Multi-stage Mixed-motive Game*, 14 EUR. J. SOC. PSYCHOL. 239 (1984).

61. N-person prisoner's dilemmas are games that involve more than two players. For a more detailed discussion, see RUSSELL HARDIN, COLLECTIVE ACTION 169 (1982).

62. Indeed, this creates the "tragedy of the commons" described by Hardin in which the players are worse off following the rational dictates of their self interests than if they coordinated their actions. Actors are driven to do so even when it is clear that it is not in anyone's long-term interest for this to happen. *See* Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1248 (1968). *See also* MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION (1971).

63. We should take care to not be confused by mere semantics. One can frame negative obligations so as to appear positive in nature. For example, rather than saying one must not drive forward at a red light, this could be recast as one must remain stopped at a red light (the act of remaining stopped being a positive act). Yet there remains a fundamental difference between the two types of legal obligations in the way they are satisfied: a negative obligation is satisfied by inaction, "by 'sitting on one's hands.'" JOHN C.W. TOUCHIE, HAYEK AND HUMAN RIGHTS 154 (2005). A negative obligation requires that the actor not do a specific act. The actor can do an endless array of other acts; however, the act stipulated by the negative obligation is not to be performed. Thus, in regards to the proscribed act, the actor can comply by inaction. A positive obligation, by contrast, requires a specific kind of action in order for there to be compliance. If a specific overt act of some kind is demanded, then it is a positive obligation; if no overt act is demanded, then it is a negative obligation. However, in some unique situations it may not simply be a matter of "sitting on one's hands" in that a negative obligation may in fact require the performance of some supporting positive act. For example: "Do not go through a red light" requires inaction. It is a negative obligation—"Do not do X." However, if you are driving a car speeding towards a red light, in order to not go through the red light, you will have to press on the brakes, gear down, etc., all of which are positive actions. However—and this is a key point—while not doing X may in some unique situations actually require a positive action to achieve this goal of non-occurrence, the end result is still that X is not performed—X does not occur. This is important because the doing of X is what constitutes the signal. Even if positive actions are needed behind the scenes to achieve the inaction of not doing X, no signaling occurs because the other party will usually never know any of this even occurred.

because they create repeated signaling opportunities that generate signal-induced trust—the overt performance of an act comprises a signal. The difference between positive and negative obligations is perhaps most clear in the case of contract. The types of action required by contract and other areas of law are in effect polar opposites. In contractual law, participants are actively doing something with specific partners as opposed to merely refraining from doing something with non-specific partners. This difference is significant. Contract regulates what people are obliged to do in addition to what they should not do. Other areas of law are mostly framed merely in the negative—it is what one must *not* do.[64]

The simplicity of this observation should not be confused for unimportance. If one were to thumb through the pages of the criminal code of any jurisdiction one would find scant few, if any, positive legal obligations towards other individuals. Negative obligations form the core of any criminal code.[65] In this kind of law—*negative law*—positive obligations to other parties do of course arise: fiduciary duties, a duty to warn, a duty of care, etc., but far less than with contract where new obligations are constantly being generated. In no other area of law do we witness this kind of wholesale construction of positive obligations to other parties. This distinction is key. Actively doing something with designated players as opposed to merely refraining from doing something with the public writ large is a critical difference. Contractual law is unique in that compliance is not merely framed in the negative; it is also framed in the positive—the other party is asked to perform a positive act. Other forms of law frame compliance only in the negative—the party is asked to refrain from a certain act. An ongoing positive act makes for better signaling—it is clearer and more frequent. Actively doing something with a specific party naturally generates a round of interaction that may then be repeated, creating a sequential iterated game with clear periods of response and counter-response between specific parties. This helps solve the prisoner's dilemma by allowing for signaling and the crucial emergence of signal-induced trust.

To illustrate this distinction, let us contrast two simple obligations: The first, "give me a kiwi," and the second, "no one ever take my kiwi." Positive obligations such as "give me a kiwi" require people to step out of the darkness

64. Fuller touches on the idea that particular forms of law can be distinguished in that they involve a certain call to action (though he is speaking of customary law in general): "[W]hat is involved is not simply a negation, a prohibition of certain disapproved actions, but also the obverse side of this negation, the meaning it confers on foreseeable and approved actions, which then furnish a point of orientation for ongoing interactive responses." Lon L. Fuller, *Human Interaction and the Law, in* THE PRINCIPLES OF SOCIAL ORDER: SELECTED ESSAYS OF LON L. FULLER 211, 213–14 (Kenneth I. Winston ed., 1981).

65. SMITH, *supra* note 13, at 7.

and form an interactional relationship that has a clear end period. Conversely, negative obligations, such as "nobody ever take my kiwi," merely require people to stay put and not do anything—they do not produce interaction of any kind. Positive obligations arising from contractual relationships create a clear round of interaction between specific parties because, by their very nature, something must be overtly performed at a definite point in time and thus brought to a conclusion. They therefore allow for signaling. Negative obligations do not—the round is simply ongoing and the players are unclear. In stipulating that you should give me a kiwi, the framework for a game, which may then be repeated, is immediately laid. If the obligation is ongoing (as is often the case with long-term contracts, such as "give me a kiwi everyday") then a repeated game is instantly created and a process of signaling is initiated. This is what, I posit, accounts for contract's greater ability to sustain itself. Let us unpack this further, and specifically in relation to the prisoner's dilemma.

B. Why Positive Obligations Naturally Solve the Prisoner's Dilemma

The standard explanation of how the prisoner's dilemma is solved correctly focuses upon repetition and retaliation.[66] That the game is repeated is crucial in this formula. However, what has been overlooked is how repeated interaction also solves the prisoner's dilemma by fostering signal-induced trust. The constituent elements of this form of trust are a natural consequence of positive obligations. Ongoing positive obligations imply conditions that naturally give rise to private ordering. For expository convenience, I name each of these conditions below.

First, the nature of a positive obligation is such that it clearly defines the players of the game, in effect creating a small-group dynamic because such obligations are owed to a specific party as opposed to the world writ large. I refer to this as *specificity*. Secondly, in satisfying positive legal obligations actors signal—they send observable information regarding compliance: their performance signals cooperation to the other party and their non-performance instantaneously signals non-cooperation. This helps the parties ascertain each other's time-horizons and this is crucial to building trust. I refer to this simply as *signaling*. Finally, the nature of positive obligations allows for cycles of repeated interaction to emerge because it fashions discrete rounds of completed interaction. Thus, they naturally break up and iterate interaction, creating repeated, signaling opportunities. This allows cooperation to unfold and build on itself cautiously in little steps. As the parties repeatedly run through cycles of interaction, ever more sophisticated and robust structures of cooperation can therefore arise as signal-induced trust emerges. I refer to this as *iteration.* For clarity, these are divided into distinct analytical categories; however, these

66. LUCA LAMBERTINI, GAME THEORY IN THE SOCIAL SCIENCES 82 (2011).

conditions are inter-related. Specificity is needed as an essential first step to establish both signaling and iteration, and signaling and iteration reinforce each other. There needs to be rounds that allow compliance to be frequently signaled, and compliance in turn fashions discrete rounds that may be repeated by bringing the interaction to a clear conclusion.

At the heart of the prisoner's dilemma is the issue of trust. If trust can be established then the dilemma is solved. These conditions solve the prisoner's dilemma by generating signal-induced trust.[67] Specificity, signaling, and iteration are all necessary for signal-induced trust to emerge because the intention to cooperate may be repeatedly and clearly demonstrated. Thus, the more these properties manifest, the more robust is the potential for private order that flows from it. It is not possible for rational trust (and therefore private ordering) to emerge if the other party is utterly anonymous, if there are no rounds of interaction, and if it is unclear when compliance has even occurred. It is not that these conditions cannot arise in the case of negative obligations. They can. However, the point here is that positive obligations naturally give rise to these conditions. In a sense, they are built into the structure of positive acts. This is simply not the case with negative obligations. Let me lay out each of these conditions in more detail as these elements bear repeating.

1. Specificity

The first of these three conditions is specificity. Specificity is a natural consequence of positive obligations. Contract with its positive obligations solves the problem of the large group of one-shot players because it carves out a specific set of participants from the amorphous mass of society, locking them into positive interactions that may then be repeated. Contract essentially recreates the small group dynamic in an accelerated, concentrated form; indeed, it is usually a group of only two parties. And it is able to do this precisely because it invokes positive obligations to specific parties. Crucially, specificity allows for signaling because it clarifies who is actually playing the game.

2. Signaling

Signaling is a natural consequence of positive obligations. The nature of a positive act is such that it clearly signals compliance (and non-compliance). This clarity is crucial to the emergence of signal-induced trust. This is not the case with the absence of an act where the signal is muddied, ambiguous, and considerably less clear.

---

67. The complication of finitely repeated games unraveling cooperation is not brought in here. Even if the game does have an endpoint, the model of an infinitely repeated game remains appropriate where the players generally do not take this endpoint into their strategic calculations.

3. Iteration

The last of these three conditions is iteration. Not only is signaling necessary, it is essential to repeat the signal, a possibility only where there are recurrent opportunities to do so. Positive obligations allow for this. Iteration is a natural consequence of positive obligations. Positive obligations create clear rounds of interaction between parties because positive obligations, by their nature, must be performed and at a specific point in time by a specific party. They are "discrete in that they demand a particular quantity and quality of action at particular points in space and time."[68] It is thus clear when there has been compliance (or non-compliance) and a round has ended.[69] It is implicit in its nature that a positive obligation brings the interaction to a definite conclusion—it must be performed in an overtly identifiable manner that allows for a transition to the next round. Thus, ongoing positive obligations naturally iterate the game (opening the door to repeated signaling). This structure creates a sequential, iterated game with clear periods of play. For instance, in the above example of an ongoing, positive obligation to give me a kiwi every day, each day that you give me a kiwi is a new round of play, and compliance has occurred when you give me that kiwi. This construction allows for the possibility of repetition between the same players because rounds can be run through in a highly-structured fashion, which in turn may give rise to ever more sophisticated forms of cooperation constructed upon the stability brought about by the parties repeatedly signaling their commitment to long-term cooperation. For there to be a high frequency of signaling, there must be many opportunities to signal—positive obligations naturally create these opportunities.

Not only is the signal clear and to a specific party, it is frequent. Because the relationship is highly iterated, ongoing positive obligations produce a much higher frequency of signaling than is with the case of negative obligations. Positive obligations define the players and make it clear when a round has been completed and with what result. Negative obligations do not. Let us look more closely at the negative side of the ledger and its natural deficiencies in terms of generating signal-induced trust.

C. Why Negative Obligations Do Not Solve the Prisoner's Dilemma

Law that proffers only negative obligations (negative law) is completely different: neither specificity nor signaling nor iteration flows naturally from negative obligations. Specificity is not a natural consequence of negative law

68. TOUCHIE, *supra* note 63, at 155.

69. The folk theorem (that repetition can solve cooperation games) is often criticized as being unrealistic in that it assumes that defection signals are emitted instantaneously and accurately. *See, e.g.*, HERBERT GINTIS, GAME THEORY EVOLVING 201 (2d ed. 2000). However, in the case of positive obligations immediate and clear signaling is exactly what occurs.

because the obligations it invokes are not usually owed to a particular party but rather to the world writ large. Signaling is not a natural consequence of negative obligations. With negative obligations the signal is not as clear as with positive obligations (or as frequently telegraphed). Action and the absence of action are not on equal footing in terms of the clarity of their signals.

We do not, for example, ask people to confirm attendance at a dinner party by *not* replying; we ask them to RSVP. We do so because silence would not be clear. While an RSVP is unambiguous, silence would not necessarily indicate they wish to attend—there may be other reasons for the inaction: perhaps they do not care enough about the party to even answer; perhaps they have not yet had an opportunity to reply, and so on and so forth. Indeed, this verity is reflected in the basic contract principle that silence can never constitute acceptance of an offer.[70] Acceptance, however, can be communicated through conduct, conduct being understood as something overt in nature.[71] Likewise, with negative obligations, the absence of action does not necessarily signal compliance; it does not confirm that the other party (whoever that is exactly) even attempted to comply. Many things may account for the presence of inaction. In the case of positive obligations, compliance and therefore non-compliance are completely clear. In the case of negative obligations, only non-compliance is really clear. This asymmetry is decisive because signal-induced trust requires the clear signaling of compliance. With negative obligations, compliance and non-compliance are not clear. A signal is only truly clear when there has been non-compliance and therefore no possibility of further cooperation.

Drilling down to the core of this difference, we see that, in contrast to the performance of a specific action, the absence of an action is the natural state of affairs and thus is ambiguous as a signal. It is for this reason that we do not signal S.O.S. with silence, signal stop with an unlit traffic light, or ask if someone is home by requesting them to remain silent. Silence, an unlit light, and the lack of response are not clear signals. This distinction is evident in the case of a nagging mother where the mother shouts at her teenage son lying in bed, "if you really want to help me get out of bed" (a positive act) and where on another occasion she says, "if you really want to help me just stay in bed and out of my way" (a negative act). In both instances, the son hears her. With the first statement compliance and non-compliance are both clear (the son gets up or stays in bed). With the second, however, the son staying in bed does not clearly indicate that he is complying—that he is a good cooperator with long-term time horizons—perhaps he just wants to sleep in. The outcome does not provide any clarity regarding the teenager's motivations. It is not a good signal. Is he a good cooperator or is he just lazy? The signal is ambiguous

70. *See* Felthouse v. Bindley, (1862) 142 Eng. Rep. 1037 (C.P.).

71. *See* Brogden v. Metro. Ry. Co., [1877] L.R. 2 App. Cas. 666.

because no overt action is required. This is precisely the difference between positive and negative obligations. Negative acts are lousy signals; they are by their nature unclear. They are thus not conducive to signal-induced trust. Signal-induced trust needs the clear and repeated communication of compliance to grow. In the case of negative obligations there is no clear signaling, no definite observable information being sent. Signal-induced trust cannot evolve from such a murky state. Clear, unambiguous signaling is required and this is only possible in the case of positive not negative obligations.

Moreover, ongoing positive obligations naturally bring about a high frequency of signaling because they iterate the game. Iteration is not a natural consequence of negative obligations because the dynamic created by, for example, demanding that no one ever take one's kiwi is merely *an ongoing state of inaction*. It is one of something not occurring, i.e., of not taking the kiwi. Refraining from doing something has no clear end.[72] There is no conclusion to the round. The players—and this is an important point—are thus stuck perpetually in just one period of play. It is essentially a one-shot game played with all of society. Indeed, negative obligations do not create repeated interactions—they are *the very absence* of them. A cycle only completes itself where there is no possibility of further cooperation; that is, where there has been non-compliance. Assuming there is compliance, the round will continue indefinitely. With a positive act, compliance and non-compliance both mark the end of a cycle, a round of interaction. With a negative act, only non-compliance will mark the end of a cycle.[73] These cycles are essential because they provide opportunities for the actors to repeatedly signal.

With negative acts, one is not engaging in repeated play with a specific party that allows for frequent signaling. Negative law is merely a negative obligation issued to the world writ large, i.e., "nobody ever take my kiwi." In the anonymity of a large group, negative obligations do not solve the prisoner's dilemma because they do not produce the conditions that tend to give rise to signal-induced trust, and thus to self-sustaining private order.

---

72. Hayek also points this out. *See* TOUCHIE, *supra* note 63, at 155 ("Negative duties, then, being continuously in effect, are not 'carried out' or satisfied by the performance of conduct and can be addressed to the entire world . . . .").

73. It is often the case that even where negative obligations are stipulated in contract, this inaction is unique in the sense that it is often tethered to a specific time or event that still allows the "game" to be sequenced. In a sense, the condition of iteration, a natural property of a positive obligation, is artificially created. It is still clear when compliance (inaction in this case) has been observed and a round of play has concluded. I would submit that in these cases, the inaction, because it is linked to a specific time period or event, is not akin to a standard negative obligation. In that it is linked to a particular time or event it should be conceptualized differently.

D. An Example Involving Telephones and a Man Named Bartley

We may at this point in our discussion be in danger of slipping into abstractions so let us ground this with another example, one involving two scenarios: scenarios X and Y. In this example, scenario X represents contractual relationships and scenario Y corresponds to other forms of law. In scenario X, Bartley asks his neighbor to call him the next day at exactly 9:15 PM, at which time Bartley will designate a new time for his neighbor to call him again the following day. In scenario Y, Bartley simply announces to the entire world (somehow) that no one should ever call him.

Scenario X, because it elicits a positive action, exhibits specificity, signaling, and iteration. There will emerge in scenario X definite cycles of interaction that will lead to further cycles of dealings between Bartley and his neighbor. Signal-induced trust may thus arise. Moreover, cooperation can grow increasingly sophisticated, as there is reduced need for a constant reliance upon immediate retaliation to avoid the trap of the prisoner's dilemma. In scenario X, each day is a new period of play. Bartley's neighbor complies, then Bartley complies, then his neighbor complies, and on it goes. This frequent interplay sets the stage for stable rules to emerge because it allows for the evolution of a cooperative relationship based upon signal-induced trust. The difference between scenarios X and Y is one of positive and negative obligations. What is occurring is that the existence of a positive obligation to call creates repeated periods of play (iteration) with a specific party (specificity), which allows for the frequent, clear signaling of compliance and non-compliance (signaling).

In contrast to this, scenario Y lacks all these conditions. There is no iteration; the players in scenario Y are stuck perpetually in one period of play. The round only ends when someone calls, otherwise it never really finishes. With scenario X, because it is a positive act, a definitive response is elicited at a precise point in time, and so the game can then transition to the next round of cooperation. This is not the case with scenario Y. There is also no specificity. It is in effect a one-shot game played with the entire world. The players are not even known—it is never clear *who* is not calling Bartley. There is no partner with whom to even build cooperative trust. Finally, there is no clear signaling. Indeed, scenario Y highlights the difficulty of communicating positive compliance through negative obligations. That no one has called Bartley does not necessarily indicate that anyone is actively cooperating with him. In fact, Bartley might be unaware of the countless aborted attempts to call him that may have occurred. The signaling of cooperation in scenario Y is not comparable in terms of clarity to that of a scenario X. Compliance in the case of a positive act is unambiguously clear because something is done. Compliance in the case of a negative act remains unclear because nothing is being done. This lack of clarity regarding the other party's intentions (or even who the other party is) inhibits the emergence of signal-induced trust.

With negative obligations, there is no clear partner, no clear round of interaction, and no clear signaling of compliance. As a result, signal-induced trust simply cannot emerge. And so it goes with law. The difference between contractual and other forms of law is in actively repeating something with specific partners, and doing so in defined stages that allows for clear signaling. In the case of ongoing positive obligations the game is iterated. This makes it possible for repeated signaling. With an ongoing commercial contract, for instance, A orders goods from B; B delivers the goods on a certain date; A pays for them on delivery. If one party complies or fails to comply, the other knows immediately. The key ingredients of private order are thus present in this kind of relationship: specificity, signaling, and iteration. Threat-induced trust can, over time, thus be replaced by signal-induced trust, a more flexible dynamic that allows for the emergence of more sophisticated cooperative structures. Where there is sustained cooperation, rules emerge to structure the cooperation. In this fashion systems of private ordering may grow.[74]

The dynamic involved in other areas of law is entirely different. It is that of scenario Y—one is not engaging in repeated play with a specific party. It is merely a negative obligation issued to the world writ large—do not infringe on anyone else's property rights, etc. With large groups, a negative obligation does nothing to generate rational trust because the players are *not made known* and they *do not actively engage* with each other. Players do not engage in repeated interactions—in fact, they *do not* interact at all. As a result, specificity, signaling, and iteration are entirely absent. The difference is between actively doing something with another party and simply doing nothing with the entire world. With the latter there is no possibility for signal-induced trust between specific parties and compliance means the game period never ends. It only ends with explicit non-cooperation and then terminates, unable to continue. While positive obligations, by their nature, lay the groundwork for repeated interactions, negative obligations, by their nature, inhibit it. In the case of positive obligations, one knows precisely *who* is *complying* and *when*, a dynamic that allows cooperation to build on itself as players run through repeated cycles of cooperative interaction, giving rise to stable forms of cooperation as signal-induced trust emerges.

E. Negative Law Needs the State; Positive Law Needs it Far Less

In a sense, we have two kinds of law: law that creates only negative obligations, and law that creates both negative and positive obligations.[75] For

74. Also of great significance, though not discussed here, is that over time the rule may even be internalized, taking on a genuine normative quality.

75. This Article does not address the rich jurisprudential debate underlying negative and positive rights: *positive rights* allow or oblige action, whereas *negative rights* allow or oblige inaction. The present argument merely observes that such obligations do in fact exist in the law

expository purposes, I have been calling the first *negative law*. For consistency, I will now call the second *positive law*.[76] The implications of this difference loom large: law that only creates negative obligations generally needs the State to back it lest it fall prey to the prisoner's dilemma. For areas of law such as criminal and tort where only negative injunctions are created (mostly), the State will always be required to give it teeth.

If the parties are known and future rounds of interaction expected, negative obligations may produce conditional cooperation to an extent—we can formulate scenarios where this may indeed be the case. For example, with every day that passes that my valuables are not stolen from my hotel room, I may become reasonably sure that the hotel does not employ any thieves. In such a situation signal-induced trust can build slowly (though not quite so robustly) because the players are made somewhat clear (i.e., the hotel's general cleaning staff), and there are even rounds of play that allow for signaling (i.e., each day the workers come into my room to clean). Thus, specificity, signaling, and iteration are present, albeit in a very muddied form.

However, in a large N-person prisoner's dilemma,[77] these conditions do not exist. The players are mostly not known and there is not any kind of repetition. There is no specificity, signaling, or iteration. To use the above example: the case would be very different if instead of the hotel's cleaning staff having access to my hotel room, the entire city did. Society is mostly a large N-person prisoner's dilemma, thus negative obligations cannot generate signal-induced trust. Ongoing positive obligations, by contrast, naturally produce the conditions that give rise to signal-induced trust because their very nature demands that they are performed with a specific party and at a specific point in time, creating both identifiable players and specific rounds of play that allow for signaling—specificity, signaling, and iteration are generated. Positive obligations in effect recreate the conditions of a small group. Rational trust may thus build much faster where there are positive acts, and trust builds much slower, if at all, in the absence of an act.

Yet the vast majority of law is negative law. When legal compliance is framed in the negative with unknown parties, as it usually is (for example, criminal law, tort etc.), private ordering is not as sustainable. Negative law is a non-sequential, non-iterated game with unknown players stuck perpetually in one round of play, and so there is nothing to build on. It is a world of one-shot predators. Negative law is non-iterated. It is like two commercial parties stuck

---

(although in an imbalanced manner) and the analysis proceeds from there. Rights theory and the normative justifications for this divide are not the focus of this paper; the focus is merely the importance of positive obligations in respect to private ordering.

76. To be clear, this term is not meant to imply positive law in its legal positivist sense—simply the kind of law that invokes positive legal obligations to act.

77. That is, there are many unknown players.

perpetually in a single transaction that never ends: there is no trust because the transaction has not yet been completed. In this kind of dynamic, rational trust is not possible—threat-induced trust is not possible let alone signal-induced trust. The strategy of all the other parties can never be known with certainty and so the threat of state coercion is necessary to prevent defection.[78] We need state power to solve the prisoner's dilemma. Without it, such systems dangle perpetually upon a precipice of anarchy.[79]

It is tempting to simply attribute non-contractual law's need for external enforcement to the absence of mutual gain that so clearly animates contract. According to this view, the element of mutual benefit is what allows contract to sustain itself in the absence of the State. The parties follow the rules because it is in both their interests to do so.[80] This view, however, is only partially correct. Mutual benefit alone is not enough. Even if other areas of law provided mutual advantage,[81] this alone would not be sufficient to sustain order because such areas of law are primarily negative law—they lack the necessary conditions that solve the prisoner's dilemma. Unless the prisoner's dilemma is solved private order cannot emerge. It is obvious that long-term contracts tend to create a repeated game dynamic. However, what is not obvious is that positive obligations play the decisive role in this, and that this repetition allows for the emergence of signal-induced trust. This is important because positive obligations are simply not present in other areas of law. Thus, these areas of law lack a comparable capacity to become self-sustaining. The prisoner's dilemma implicit in human cooperation sabotages the prospect of self-sustaining legal order. For negative law, the heavy hand of the State is needed to maintain order. Thus, any system of legal order that creates positive obligations between parties (positive law), as in the case of contract, will be relatively more predisposed to generating self-sustaining systems of order. The greater the presence of positive obligations, the greater the law's potential for private ordering.

This gives rise to a much broader question: what conclusions may be gleaned from applying performance signaling theory to law in an international context where there is no overarching authority, no centralized enforcement regime to speak of? To what extent can this theory help explain the emergence

78. S. R. EPSTEIN, FREEDOM AND GROWTH 8 (2000).

79. This is not, however, meant to imply that if formal law was removed people would rush out and start murdering each other. This is thankfully not the case; internalized normative beliefs powerfully reinforce these rules. However, this does not apply to all actors—murderers do walk among us. Moreover, while normatively charged rules of conduct such as those regulated by criminal law may be mostly internalized, this is not the case for other less normatively potent areas of law, such as tax law, company law, or many areas of tort. For negative law in this context, the punitive hand of the state is indeed required.

80. ALEXANDER, *supra* note 25, at 47.

81. And indeed such areas of law arguably do in that actors are able to avoid costly conflict.

of public international law despite the lack of any coercive authority? It is to this question of tremendous importance that we now turn, and it is to this question that the remainder of the discussion is devoted.

III. THE IMPLICATIONS FOR PUBLIC INTERNATIONAL LAW THAT FLOW FROM PERFORMANCE SIGNALING THEORY

The previous section mapped out the basics of performance signaling theory; this section applies it. Performance signaling theory has important implications for public international law in that it emerges in the vacuum of centralized enforcement. It was argued above that contract-based law possesses a more powerful ability to sustain itself without third-party enforcement compared with legal order constructed from negative law, and that this is a result of its use of positive obligations, which facilitate signaling. This applies equally in an international context between national governments. Political scientists have devoted considerable attention to how international legal regimes induce compliance and why they often fail to do so.[82] Performance signaling theory may prove useful in illuminating why some treaties are successful in this regard while others flounder. It may help answer an important two-pronged question: given that power and geopolitical interests shape the behavior of state actors, to what extent can a treaty's structure determine compliance, and if so, how should these international instruments be crafted to elicit compliance? Game theory has been extensively applied to treaty compliance, specifically in relation to verification.[83] Performance signaling theory may be useful here. Positive obligations are clearly not the sole determining factor in whether or not a treaty is successful, but it may play a significant role. The remainder of this discussion explores the extent of this role and the theory's broader implications for public international law.

A. Public International Law as a Form of Private Ordering

By the term public international law I mean an expansive range of agreements and practices that includes not only formal treaties, but also customary international law and even the international norms that underpin it.

---

82. *See, e.g.*, ROGER FISHER, IMPROVING COMPLIANCE WITH INTERNATIONAL LAW 6 (1981); Jutta Brunnée, *Enforcement Mechanisms in International Law and International Environmental Law*, 3 ENVTL. L. NETWORK INT'L REV. 1, 3 (2005); Abram Chayes & Antonia Handler Chayes, *On Compliance*, 47 INT'L ORG. 175, 176 (1993); Harold K. Jacobson & Edith Brown Weiss, *A Framework for Analysis*, *in* ENGAGING COUNTRIES 1, 2, 7 (Edith Brown Weiss & Harold K. Jacobson eds., 1998); O. N. Khlestov, *The Origin and Prospects for Development of Control over Compliance with International Obligations of States*, *in* CONTROL OVER COMPLIANCE WITH INTERNATIONAL LAW 23 (W. E. Butler ed., 1991).

83. For an excellent overview of this literature, see Barry O'Neill, *Game Theory Models of Peace and War*, *in* 2 HANDBOOK OF GAME THEORY WITH ECONOMIC APPLICATIONS 1017–18 (Robert J. Aumann & Sergiu Hart eds., 1994).

Treaties, however, form the apex of international legal order—they are its most concrete and deliberate form.[84] For the most part, international law is now developing primarily through treaties.[85] As such, treaty law is our focus here.[86] Yet, it is important that we not delude ourselves into believing that we are now living in an age where international law is firmly established and rapidly converging—this is hardly the case.[87] What we are witnessing is an exceedingly slow, painstaking evolution of legal order on the international stage. There is no central authority able to reliably enforce law on a global scale.[88] Indeed, on an international level, we still face a Hobbesian state of nature where state actors remain largely unrestrained. Many claim there is no "real" international law, certainly not in the sense of its domestic counterpart, in that it lacks a central coercive authority.[89] International law presents a puzzle to some extent. Despite the absence of such an authority, legal order has steadily been evolving in an international context.[90] With state actors we are, in many crucial respects, hurled back to the position that bands of individuals are in without state law. It is a technical state of anarchy. Yet legal order arises nonetheless.

Legal order emerges in one of two ways:[91] either as the child of a single overarching authority, usually a nation-state, that possesses a monopoly on enforcement so that the rules it fashions are backed by coercive force, or as a system of private order between actors cooperating without recourse to any higher authority to enforce the rules that govern their interactions.[92] International law is a product of the second. As one scholar remarked, public international law may be defined as "law *between* states, not *above* states."[93] Indeed, anyone who doubts the possibility of spontaneous law—the ability of legal order to emerge without resort to a centralized enforcement regime—

84. MALCOLM N. SHAW, INTERNATIONAL LAW 810 (5th ed. 2003).

85. UNITED NATIONS ENVIRONMENT PROGRAMME, TRAINING MANUAL ON INTERNATIONAL ENVIRONMENTAL LAW 2 (2006). *See also* G.J.H. VAN HOOF, RETHINKING THE SOURCES OF INTERNATIONAL LAW 119 (1983); Rüdiger Wolfrum, *Legitimacy of International Law from a Legal Perspective: Some Introductory Considerations*, *in* LEGITIMACY IN INTERNATIONAL LAW 7 (Rüdiger Wolfrum & Volker Röben eds., 2008).

86. The theory laid out in part two, however, could also readily be applied to these other components of international law, such as customary law. Arguably, the *lex mercatoria* is an illustrative example. Indeed, the theory may be applied to private law in an international context in general. However, this is not explored here but rather offered as a future avenue of research.

87. ANTHONY AUST, HANDBOOK OF INTERNATIONAL LAW 2 (2005).

88. *Id*. at 3.

89. For a discussion along these lines, see *id.*

90. ANDREW T. GUZMÁN, HOW INTERNATIONAL LAW WORKS 9 (2008).

91. Although a more nuanced approach might hold that law may also arise as a combination of both.

92. *See* ELLICKSON, *supra* note 5, at 1, 137.

93. L.N. RANGARAJAN, THE LIMITATION OF CONFLICT 223 (1985).

should take note of the growth of public international law. Indeed, the legal centrist would be at pains to account for how international legal order can arise at all upon the world stage where, clearly, there is no such central supranational authority.[94] The existence of public international law is a testament to not only the plausibility of private ordering but of its indisputable existence. Public international law is, as Fuller calls it, a model example of a "horizontal" form of order as opposed to a "vertical" system of order imposed by a central authority.[95]

Indeed, if we depart slightly from the strict definition of private ordering (i.e., the coming together of *non-governmental* parties in voluntary arrangements),[96] a case could be made that public international law is best understood as a form of private order in that it evolves without recourse to any overarching authority beyond itself. Indeed, it is used precisely in this sense below. With treaties there is "no small claims court for redressing failure to perform as agreed, no state police power to compel restitution for bad faith, no formal mechanisms comparable to those available to citizens who enter contracts."[97] Treaties are a form of private ordering, but one where the participants are simply state actors rather than individuals. The theory of private order laid out above can therefore shed useful light on the ability of treaty law to sustain itself despite the absence of third-party enforcement.

B. The International Lex Scripta: Treaties Are Essentially Contracts Between States

In many respects, international treaties are a paradigm of private ordering. Since the second half of the twentieth century their use has exploded in the international community: approximately 54,000 treaties have been registered with the United Nations since 1945 (and this probably only represents about seventy percent of all treaties).[98] The 1969 Vienna Convention defines a treaty as "an international agreement concluded between states in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular design."[99] A treaty thus embraces all instruments formed between two or more international juridical persons; conventions, agreements, protocols, and exchanges of letters

94. To be sure, the United Nations does not sufficiently meet this criterion. *See* SCHAEFE, *supra* note 7, at 180–81.

95. FULLER, *supra* note 26, at 233.

96. *See Compulsory Terms and Private Ordering*, HARVARD UNIV., http://cyber.law.harvard.edu/bridge/LegalProcess/compulsory.htm (last visited Nov. 8, 2013).

97. Russell Hardin, *Contracts, Promises and Arms Control*, 40 BULL. OF THE ATOMIC SCIENTISTS, Oct. 1984, at 14, 15.

98. ANTHONY AUST, MODERN TREATY LAW AND PRACTICE 1 (2007).

99. Vienna Convention, art. 2(1)(a), May 23, 1969, 1155 U.N.T.S. 331 (entered into force Jan. 27, 1980) [hereinafter Vienna Convention].

or notes may all constitute treaties.[100] Yet at its most basic level, a treaty is simply a contract between state actors.[101] "A treaty," Chief Justice John Marshall once observed, "is, in its nature, a contract between two nations, not a legislative act."[102] In a treaty, parties willingly assume obligations between themselves, and like contract, the two sides do so because they seek to gain some benefit. Russell Hardin makes this point: "Treaties are roughly analogous to contract and mutual promises. Like contracts, they are formal; like promises, they are backed by no higher authority. We enter into promises, contracts and treaties because each party expects to gain as a result."[103] Treaties are similar to contracts in that they "express a mutual exchange of rights and obligations."[104]

Indeed, bilateral agreements in particular resemble simple contracts far more than they do statutory law.[105] Bilateral treaties represent the vast majority of international treaties.[106] As such, they are the primary focus here. Yet, multilateral treaties are also similar to contracts in many respects; restricted multilateral treaties are very much like contractual arrangements in that they often assign positive obligations involving close cooperation between states for a specific purpose, such as the construction of a dam or aspects of economic integration, as with the European community.[107] Such treaties set out particular rights and obligations as they relate to these specific endeavors and bind only those states named in the treaty that have consented to it.[108] And just as contract is constructed upon the core principle of consent, so too are treaties and international agreements founded upon the notion of consenting parties.[109]

---

100. Cédric van Assche, *Article 13, Convention of 1969*, 1 THE VIENNA CONVENTIONS ON THE LAW OF TREATIES 255 (Olivier Corten & Pierre Klein eds., 2011).

101. Some international organizations such as the World Bank and the IMF also have the capacity to enter into international treaties. *See* SIGRUN SKOGLY, THE HUMAN RIGHTS OBLIGATIONS OF THE WORLD BANK AND THE INTERNATIONAL MONETARY FUND 81 (2001).

102. Foster v. Neilson, 27 U.S. 253, 314 (1829).

103. Hardin, *supra* note 97, at 14.

104. LINDA A. MALONE, INTERNATIONAL LAW 8 (2008). *See also* ROBERT T. DEVLIN, THE TREATY POWER UNDER THE CONSTITUTION OF THE UNITED STATES 196 (1908).

105. GUZMAN, s*upra* note 90, at 9–10; OSCAR SCHACHTER, INTERNATIONAL LAW IN THEORY AND PRACTICE 75–76 (1991).

106. SCHACHTER, *supra* note 105, at 74.

107. MALONE, *supra* note 104, at 8.

108. 4 POLISH CIVIL LAW 15 (D. Lasok ed., Z. Negbi trans., 1975).

109. For instance, sources of international law outlined in Article 38(1) of the Statute of the International Court of Justice are guided by the principle of consent. Indeed, the principle of State sovereignty underlies treaty law. Article 34 of the Vienna Convention states that "[a] treaty does not create either obligations or rights for a third state without its consent." *But see* MEHRDAD PAYANDEH, INTERNATIONALES GEMEINSCHAFTSRECHT 532 (2010) ("It is generally accepted that treaties may produce legal effects even for States that are not parties to them. This is the case at least for the Charter of the United Nations as well as for certain treaties constituting an international regime or status."). *See also* the Consensual Theory of International Law, which

In fact, the term *consensual law* is used in international public law parlance to describe law voluntarily adopted by states, such as treaty obligations.[110] Indeed, "Treaties are in this sense contracts between states."[111] A treaty has force only for those states that have consented to be bound by it.[112] Treaties are predicated upon consent because, just as with contract, parties voluntarily enter into them motivated by self-interest. It is a fundamental principle of treaty law that not only are treaties binding upon these parties, but also, like private contracts, they are expected to be performed by the parties in good faith.[113] The basic principle *pacta sunt sevanda* ("agreements must be kept") applies, implying that non-fulfillment of the respective obligations is a breach of the pact. Treaties may even be ended on grounds that are very much analogous to contract law defenses.[114]

Yet unlike contract, there is no central governing authority able to compel parties to a treaty to abide by the agreement.[115] Despite this, treaties can often achieve a high level of self-enforcement.[116] Where treaties are self-sustaining, it is for precisely the same reasons that contract may be. Treaties, like contract, are predicated upon the same dynamic of mutual benefit. However, like contract, this benefit alone is not always enough to ensure compliance. Although states generally benefit from treaty agreements, there is often a strong incentive to free ride (this is particularly true of large multi-lateral treaties aimed at providing public goods such as environmental treaties).[117] Let us take a closer look at how long-term, self-sustaining cooperation is able to emerge between state actors in the context of treaties.

---

sees "the binding force of an international law rule in the consent of states, given expressly as in a treaty or by tacit agreement or acquiescence, as in the case of customary rule of law." BOLESLAW A. BOCZEK, INTERNATIONAL LAW: A DICTIONARY 4 (2005).

110. Anthony D'Amato, *International Law as a Unitary System*, *in* ROUTLEDGE HANDBOOK OF INTERNATIONAL LAW 101, 101 (David Armstrong ed., 2009).

111. SHAW, *supra* note 84, at 817.

112. BUTLER, s*upra* note 82, at 73–74.

113. References to good faith are found in articles 31, 46, and 69 of the Vienna Convention. *See* Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, 264 (July 8). *See also* J. F. O'CONNOR, GOOD FAITH IN INTERNATIONAL LAW 1 (1991).

114. HARDIN, *supra* note 97, at 15. *See* Vienna Convention, *supra* note 99, at art. 60 (regarding material breach).

115. There is, of course, the possibility of recourse to the International Court of Justice and forms of dispute arbitration. However, the true extent of the enforcement power of these mechanisms is very much debatable. *See* Attila Tanzi, *Problems of Enforcement of Decisions of the International Court of Justice and the Law of the United Nations*, 6 EUR. J. INT'L L. 539, 541–42 (1995). For a discussion of dispute settlement for treaties, see J. G. MERRILLS, INTERNATIONAL DISPUTE SETTLEMENT (3d ed. 1998).

116. *See* Harold Hongju Koh, *How Is International Human Rights Law Enforced?*, 74 IND. L.J. 1397, 1407–08 (1999).

117. THOMAS STERNER, POLICY INSTRUMENTS FOR ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT 204 (2003).

C. International Treaties Are Largely Self-Sustaining Because They Exhibit the Same Characteristics Produced by Positive Obligations

One scholar famously observed that "almost all nations observe almost all principles of international law . . . almost all of the time."[118] Yet apart from the total collapse of the treaty, the threat of retaliation is actually quite limited. Collective enforcement through penalties and binding judicial processes such as dispute settlement remains relatively rare.[119] Sanctioning authority is seldom granted by treaties and rarely used even where it is granted.[120] As a consequence, signal-induced trust is far more important in the long-term success and sustainability of a treaty than threat-induced trust. Private ordering emerges between state actors just as it emerges between individuals through long-term contract. A treaty possesses a strong potential to give rise to private order because it mimics the dynamic of contract and thus produces the conditions necessary for private order discussed earlier: specificity, signaling, and iteration. To the extent that treaties exhibit these conditions, private ordering is more likely to emerge. The more these conditions are present, the more robust is this potential. Where these conditions are less pronounced or totally absent as they are with some treaties, international agreements are far less likely to generate self-sustaining legal order.

In what ways do treaties possess the constituent conditions of private order? The first of these is party specificity. In regards to treaties, this condition is always present. Like contract, the specific participants to the agreement are clearly designated, and, as in the case of contract, this specificity creates a small-group dynamic because obligations are owed to specific parties as opposed to simply the world writ large. This condition is met in the case of multilateral as well as bilateral treaties—in a treaty the parties are always identified. However, regarding the remaining conditions of iteration and signaling, whether or not these conditions are present very much depends on the particular provisions and nature of the treaty. Treaties cover a broad range of subjects: the termination of hostilities, the settling of economic disputes, the acquisition of territory, nuclear non-proliferation and arms control, environmental issues, issues surrounding international transportation, the exchange of scientific technology, space exploration, telecommunications, mutual defense, the forging of economic links, and so on and so forth. For the most part, treaties will involve positive obligations that are to be met by the

118. LOUIS HENKIN, HOW NATIONS BEHAVE 47 (2d ed. 1979).

119. Jutta Brunnée, *Enforcement Mechanisms in International Law and International Environmental Law*, *in* 2 STUDIES ON THE LAW OF TREATIES, ENSURING COMPLIANCE WITH MULTILATERAL ENVIRONMENTAL AGREEMENTS 1, 7 (Ulrich Beyerlin et al. eds., 2006).

120. ABRAM CHAYES & ANTONIA HANDLER CHAYES, THE NEW SOVEREIGNTY 32–33 (1995).

parties to the treaty. Where they do, the conditions for private ordering will be present.

This, however, is not always the case. Treaties do not always involve positive obligations. Examining treaties from this perspective may prove very useful in terms of accounting for their sustainability as systems of private order. I will first discuss the case where treaties do not invoke positive obligations but rather call for an absence of action, examining the impact of this upon a treaty's ability to sustain itself over the long term. I will then look at how the majority of treaties, like most contracts, do in fact impose positive obligations upon the parties involved, and the importance of this for the future of public international law. It should be noted that the approach assumed here is very much in line with rationalist theories, notably institutionalism and political economy that conceptualizes states as strategic actors guided by rationally assessed self-interest.[121] While the subject of treaties is a complex one, the discussion proceeds on a very general level. The rich theoretical literature on treaty compliance is not explored. The purpose of the present discussion is better served if an overly technical discussion of treaty law is avoided—the issue before us is simply how, with reference to the principle of positive obligations, private ordering arises through treaties. For that, a special approach is required. There are a variety of ways to categorize treaties. However, the present analysis calls for a very particular taxonomy, one related to the nature of the obligations created. These are: treaties that deal almost exclusively with negative obligations, treaties that deal predominately with negative obligations but employ positive obligations to shore up their deficiencies in terms of signaling, and treaties that deal primarily with positive obligations and as such possess the greatest potential for private ordering because they possess very robust signals. Each will be dealt with in turn.

D. Treaties that Deal Almost Exclusively with Negative Obligations

Treaties generally fit the bill of positive law: they clearly define the players of the game, which creates a small group dynamic, and they usually fashion discrete rounds of interaction, which allows observable information regarding compliance to be communicated. The extent to which a treaty creates these critical conditions determines the extent to which it can sustain private order because it allows for the emergence of signal-induced trust. As in the case with contracts, treaties that impose positive obligations upon the parties naturally create these conditions. However, not all types of treaties create positive obligations: certain treaties, by their nature, do not call for action but rather an absence of action. In this respect, they resemble negative law—but not entirely.

---

121. Brunnée, *supra* note 119, at 9.

A classic example of a treaty that deals almost exclusively with negative obligations, calling for an absence of action rather than action, is a military non-aggression treaty between two states. By their nature, treaties of this kind call for inaction: refraining from military hostilities. Returning to our hotel analogy, the dynamic of such treaties is comparable to a situation where my valuables do not go missing from my hotel room but there is only *one* member of the staff who has access to my room. Each day that passes and my valuables are not stolen buoys my confidence that the staff member is not a thief. This is because the players of the game are specified (the staff member and I) and there is a limited kind of signaling. The anonymity of a N-person prisoner's dilemma is solved in this case (indeed, the anonymity of players is a major deficiency of negative law, and this is always resolved in the case of treaties). It is the case with all treaties, regardless of the kinds of obligations they create, that the actors are specified. This fact alone creates the conditions of a small group. The fact that the parties are known allows for a certain degree of signaling. This structure is not the equivalent of negative law, and as such fares a comparatively better chance at sustaining itself. This is, however, tempered by the fact that the other two conditions for private order are not met.

While in the hotel analogy there is a basic form of signaling (my valuables have not yet been stolen), the signal is not entirely clear. For instance, I do not know if the staff member attempted to steal my valuables but could not find them, or did not yet have an opportunity to leave his post to sneak into my room. I do not know if perhaps he is planning to steal my valuables tomorrow when circumstances are more optimal. In terms of signaling, his not stealing my valuables is considerably less clear as his performing an overt action of some kind. This is the dynamic present in the case of a non-aggression treaty between two states. Signaling is possible to a limited extent in that the other party has not yet attacked; however, as with the hotel analogy, the signal is not as clear as in the case of positive actions where compliance is, by its nature, an overt act. One is less sure of the situation. As a result, signal-induced trust will not emerge, at least not to any significant degree. Moreover, no clear rounds of play are generated that may reinforce these signals. It is not an iterated game: the players are stuck perpetually in one round of play. The round only ends when the staff member steals my valuables, and a state only knows a non-aggression treaty has been broken when it has been attacked. Because there are no clear rounds of play, signaling opportunities are not as clear. As such, signal-induced trust will not emerge—cheating looms as an ever-present threat. There is no reliable information being repeatedly transmitted regarding the strategy of the other party. The motivation for the other party's inaction remains unclear. It is not fertile soil for trust.

Take for instance the Korean Armistice Agreement. It contains no positive obligations that may be repeated as clear signals of cooperation. The agreement famously calls for a demilitarized zone;[122] however, this is primarily negative in nature and does not create rounds of repeated signaling that may build trust. The initial ceasing of hostilities was a positive action (and a clear signal); however, thereafter it immediately reverted into an ongoing negative action. The agreement's obligations are of a very limited character. There is only a very paltry form of signaling. As such, the agreement has not given rise to a relationship of robust trust. North and South Korea have remained dangling upon the precipice of hostilities for the past half-century, stuck essentially in one period of play.[123] Beyond the maintenance of the demilitarized zone, only a very rudimentary form of signaling is present: the absence of outright military attack. This has been insufficient to stimulate signal-induced trust between the former combatants. The rational trust that does exist between the two is merely a very basic threat-induced trust, just sufficient to keep the prisoner's dilemma in check.

As is the case with non-aggression treaties, only a very limited and rudimentary form of signaling exists insufficient to give rise to signal-induced trust. It is the case that the first condition (party specificity) is met; however, the second condition (signaling) remains undeveloped, and the third condition (iteration) is totally absent. A stronger treaty in this vein would be one that calls for a series of positive acts—for example, inspections of troop levels, the destruction of arms manufacturing plants, etc.—as these sorts of positive obligations would create rounds of signaling. Treaties that employ almost exclusively negative obligations, while possessing a better potential for private ordering than pure negative law in that the players are at least known and basic signaling is possible, possess a significantly less robust potential to give rise to self-sustaining legal order than other forms of treaties. It is perhaps partially for this reason that bilateral non-aggression treaties, once a very popular form of international instrument in the nineteenth and early twentieth centuries, largely fell out of use after the Second World War.[124]

International agreements that involve negative obligations can achieve a degree of sustainability only to the extent that all the elements naturally generated by positive law—specificity, signaling, and iteration—are present. Thus, treaties that employ predominantly negative obligations yet also incorporate positive obligations are comparatively better positioned to produce stable private ordering than treaties that only employ negative obligations. It is

122. Military Armistice in Korea and Temporary Supplementary Agreement, U.N.-N. Kor., art. I(1), July 27, 1953, 4 U.S.T. 234.

123. SOUTH KOREA: A COUNTRY STUDY 276–79 (Andrea Matles Savada & William Shaw eds., 4th ed. 1992).

124. YORAM DINSTEIN, WAR, AGGRESSION AND SELF-DEFENCE 79 (5th ed. 2011).

for this reason that treaties are often deliberately crafted so as to include some manner of positive obligations.

E. Treaties that Deal Predominately with Negative Obligations but Employ Positive Obligations

Good examples of treaties of this kind are arms control treaties that prohibit the building or stockpiling of certain weapons.[125] While such treaties impose an obligation of inaction (refraining from the building of certain arms)—the sole purpose of such treaties—they typically incorporate positive acts to be performed that solve the inherent, structural shortcomings of agreements based solely upon the absence of action. Treaties of this type do this because they must—by their nature, they involve negative obligations where compliance and non-compliance may go totally undetected and therefore signal-induced trust cannot arise. Indeed, signaling may be entirely absent—not even the luxury of knowing when defection has occurred is afforded. Thus, in order to shore up this failing and generate at least the potential for sustainability, the drafters inject positive obligations into the treaty that allow for signaling and iteration in addition to mere specificity.

This typically takes the form of robust verification regimes and specific deadlines that require positive acts to be met in a predetermined sequence thereby "artificially" creating rounds of play that provide opportunities for repeated signaling. Treaties of this kind are typically drafted so as to break up the process into periods of play, creating an iterated-game dynamic where signaling is possible. In this fashion, all three elements of private ordering are assured: specificity, signaling, and iteration. Signal-induced trust thus has the potential to arise, infusing a measure of stability into the treaty. In that retaliation apart from outright termination of the treaty is not always practical or even available, the significance of verification is better conceptualized not as a retaliatory opportunity, but rather as a signaling opportunity that builds signal-induced trust between the parties. Verification is simply the creation of repeated signaling rounds where otherwise there would be none. With this in mind, the famous Russian proverb "trust but verify" might be better expressed as "trust but signal," as it is repeated signaling that creates trust. Because such treaties employ only negative obligations, the conditions of private order are not fully present. The situation remains a one-shot game. Parties cannot verify/signal, so they cannot trust and lack the ingredients for sustained, robust cooperation. Parties are thus forced to find a solution: they embed positive obligations in the treaty, creating verification regimes and rounds of play that allow for repeated signaling. They do so not with a full understanding of the

125. Note that arms control treaties that call for a reduction of arms employ a form of positive obligation; however, they fall victim to the same issue of how observable the process is.

impact of positive obligations, but rather because such an approach seems most intuitive in terms of achieving compliance.

The verification regimes of treaties such as the Chemical Weapons Convention (CWC) and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the objectives of which are purely negative in nature, have installed mechanisms to facilitate complex signaling. The CWC, for example, calls for a host of positive actions: national declarations, the implementation of legislation, data collection, the creation of a national authority, routine inspections, and challenging inspections.[126] Positive obligations such as these create signaling. Verification provides an opportunity for states to demonstrate compliance.[127] Other arms control treaties call for a straightforward reduction in arms, which is in fact itself a positive action, yet nonetheless falls victim to the same shortcomings of negative obligations in that signaling can remain uncertain despite its positive character. To compensate for this, parties to these kinds of treaties create elaborate verification measures to ensure signaling. For example, in order to clearly signal compliance under the Strategic Arms Reduction Treaty (START I), the U.S. military severed 365 B-52s into five separate parts, leaving the ruined parts in place for ninety days so Russian spy satellites could verify the bombers had been destroyed.[128]

The New START treaty, which reduces the United States' and the Russian Federation's respective stockpiles of nuclear weapons, is a recent illustrative example of how a treaty may "artificially" create iteration and signaling, albeit at its most remedial, undeveloped level.[129] The terms of the New START treaty call for a number of specific actions within designated periods covering a period extending from the first few days after entering into force up to the entire ten-year life of the treaty.[130] The implementation process thus builds in repeated rounds of signaling into its structure. For instance, the treaty calls for: an exchange of inspector information within the first twenty-five days after entry into force;[131] the provision of information on the numbers, locations, and technical characteristics of weapon systems no later than forty-five days;[132] an

126. Daniel Feakes, *Evaluating the CWC Verification System*, DISARMAMENT FORUM, Dec. 2002, at 11, 11 (2002).

127. *Id.*

128. NICHOLAS A. VERONICO & RON STRONG, AMARG: AMERICA'S MILITARY AIRCRAFT BONEYARD 120 (2010).

129. Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, U.S.-Russ., Apr. 8, 2010, S. TREATY DOC. NO. 111-5 (2010) [hereinafter New START].

130. *See id.*

131. Protocol to the Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, pt. 4, § VI(5), U.S.-Russ., Apr. 8, 2010, S. TREATY DOC. NO. 111-5 (2010) [hereinafter New START Protocol].

132. *Id.* at pt. 2, § I(3).

exhibition of strategic offensive arms no later than sixty days;[133] the right to begin inspections at sixty days;[134] the one-time exhibition of U.S. heavy bombers no later than 120 days;[135] a further exhibition of sensitive technology no later than 180 days;[136] the exchange of updated databases no later than 225 days;[137] the one-time exhibition of a U.S. B-1B heavy bomber no later than one year after entry into force;[138] a one-time exhibition of missile launchers no later than three years;[139] both parties to meet the limits laid out in the treaty regarding warheads and their delivery systems no later than seven years;[140] and the possible ratification of the treaty at its expiry ten years after entry into force.[141]

The rounds for signaling are mostly concentrated in the earlier phases of the treaty. These signaling rounds are designed to generate a measure of signal-induced trust designed to carry the parties through the life of the treaty and, ideally, beyond to its extension. The treaty gradually builds up to more costly acts of compliance as signal-induced trust emerges between the parties. The most costly round of compliance is not until seven years into the treaty. This structure parallels commercial parties engaging in long-term contractual interaction: initially, only small steps of calculated low-risk trust are required; this is then increased as rational trust emerges from repeated rounds of signaling. The treaty is crafted so as to generate a limited self-sustaining system of private order between the United States and the Russian Federation regarding strategic arms reduction, and signal-induced trust is invoked to achieve this. The treaty is structured to do this through its use of positive obligations in sequenced rounds of play thereby ensuring repeated, clear signaling opportunities.

Treaties that are primarily negative in nature do not have all the natural properties for private ordering. Thus, we see attempts to shore up this deficiency by embedding positive obligations into the treaty. Arms control treaties are good examples of this. Treaties that employ predominately positive obligations, however, possess all the natural properties that may give rise to private order. It is to such agreements that I now turn.

---

133. *Id.* at pt. 5, §§ I(2), VIII(2).
134. *Id.* at pt. 5, § I(2).
135. *Id.* at pt. 9, Fourth Agreed Statement, 3.
136. New START Protocol, *supra* note 131, Annex on Telemetric Information, pt. 4(1).
137. *Id.* at pt. 4, § II(2).
138. *Id.* at pt. 9, First Agreed Statement, 1.
139. *Id.* at pt. 9, Second Agreed Statement, 1(a).
140. New START, *supra* note 129, at art. I(1).
141. *Id.* at art. XIV(2).

F. Treaties that Employ Predominately Positive Obligations

Treaties that employ predominately positive obligations possess the strongest potential to produce sustainable private ordering because they foster the emergence of signal-induced trust. Perhaps the archetypal example of a treaty of this kind is the Treaty Establishing the European Economic Community (TEEC), otherwise known as the Treaty of Rome. The Treaty created the legal superstructure upon which the European Union, perhaps the definitive example of a complex system of evolving transnational private order, was eventually constructed.[142] The structure of the treaty naturally allowed for repeated signaling. The Treaty of Rome established a twelve-year implementation period divided into three stages of four years each, thereby creating a sequenced game structure conducive to the emergence of a stable signal-induced trust between the six parties.[143] Transition from the first to second stage was conditional on the successful implementation of the first series of obligations.[144] In each stage, a set of actions was assigned to the parties to be initiated at specific dates and carried through concurrently.[145] These actions included a bevy of positive obligations, such as: the elimination of customs duties and quantitative restrictions on the import and export of goods; the establishment of a common customs tariff; freedom of movement for persons, services, and capital; a common policy in the sphere of agriculture and transport; a system ensuring that competition in the common market is not distorted; coordination of economic policies; a standardization of laws to allow the proper functioning of the common market; the creation of a European Social Fund; and the establishment of a European Investment Bank.[146]

Even more crucially, however, in addition to the larger implementation timeline, these complex ongoing positive obligations created countless rounds of signaling. Each time a signatory observed any of its positive obligations under the treaty it created yet another signaling round between the parties. For instance, the adherence to common customs by member states is an ongoing positive action repeatedly occurring. This collection of positive obligations laid the crucial framework for signal-induced trust and thus for the emergence of a robust system of private order upon which further cooperative structures could be, and indeed were built. The Treaty of Rome laid the crucial foundations for the Schengen Treaty, the Maastricht Treaty, and eventually the Lisbon Treaty that established the European Union. The contention here is that the positive character of the obligations invoked by the Treaty of Rome was instrumental in

142. ANDREW MORAVCSIK, THE CHOICE FOR EUROPE 86 (Peter J. Katzenstein ed., 1998).

143. Treaty Establishing the European Economic Community, art. 8(1), Mar. 25, 1957, 298 U.N.T.S. 11 [hereinafter Treaty of Rome].

144. *Id.* at art. 8(3).

145. *Id.* at art. 8(2).

146. *Id.* at art. 3.

this successful legal evolution. Indeed, the European Union is perhaps the most sophisticated example of a large-scale system of private ordering in human history.

Brief mention should be made here regarding the European Court of Justice (ECJ), as the ECJ resembles, in many respects, an external coercive entity. This appearance, however, is misleading. The ECJ is not an external enforcement authority. The court can initiate proceedings against a member state for failing to meet its obligations (we are concerned here with the ability to hold member states to their obligations as opposed to individuals within those states).[147] Yet up until as late as 1992, the ECJ's enforcement powers were limited to merely issuing a declaration, the cost of noncompliance being merely reputational.[148] It was only until after the Treaty of Maastricht that the ECJ was even able to impose financial penalties against recalcitrant members.[149] Notwithstanding this, the ECJ lacks the ability to actually exert compliance by way of force.[150] If a member state simply unilaterally refused to pay an imposed penalty, the European Union could do nothing but resort to the usual diplomatic devices.[151] Theoretically, member states could even exploit their position as masters of the treaty to repeal the enforcement authority of the ECJ.[152] Indeed, despite its appearance, the ECJ's enforcement ability should not be confused with the authority of national courts over parties to a contract. They are not at all the same. The enforcement power of the ECJ is entirely predicated upon the continuing commitment of its member states to even recognize its authority. Without such recognition, the ECJ simply has no bona fide enforcement power. The coercive authority of the ECJ is "best considered an act of self-commitment and is intended to secure the credibility of [its member states'] mutual policy obligations."[153] It is an enforcement mechanism created by the participants themselves, and so is contingent upon the participants' implicit consent. A closer analogy would be something akin to mediation. It is not an external coercive body in the true meaning of the word.

Despite its name, the European Court of Justice should not be confused with the enforcement power of courts on a national level. The European Union

147. ALINA KACZOROWSKA, EUROPEAN UNION LAW 395 (2009).

148. SUSAN WOLF & NEIL STANLEY, WOLF AND STANLEY ON ENVIRONMENTAL LAW 87 (5th ed. 2011).

149. Takis Tridimas, *The European Court of Justice and the Draft Constitution: A Supreme Court for the Union?*, *in* 1 EUROPEAN UNION LAW FOR THE TWENTY-FIRST CENTURY 126 (Takis Tridimas & Paolisa Nebbia eds., 2004).

150. Jonas Tallberg & Christer Jonsson, *Compliance Bargaining*, *in* EUROPEAN UNION NEGOTIATIONS 90 (Ole Elgström & Christer Jonsson eds., 2005).

151. SIONAIDH DOUGLAS-SCOTT, CONSTITUTIONAL LAW OF THE EUROPEAN UNION 422 (2002).

152. Tallberg & Jonsson, *supra* note 150, at 89.

153. *Id.* at 89–90.

very much remains a system of private ordering in the sense that it has evolved in the absence of an external coercive authority able to instill compliance through force.

G. Close Alliances and the Possibility of Exploiting Positive Obligations to Stimulate Private Ordering

Cooperation that arises between close allies on the international stage is predicated primarily upon signal-induced trust. Signal-induced trust can produce more sophisticated forms of cooperation than threat-induced trust because the option of retaliation is not always available in many situations that could otherwise be opportunities for cooperation. Treaties are implicitly less stable when they rely only on basic threat-induced trust. Moreover, signal-induced trust is far more conducive to law building because the parties need not proceed as guardedly. Treaties are analogous to contracts between individuals, and close allies sharing many treaties are comparable to individuals in successful long-term commercial relationships: initially their dealings are based on the threat of retaliation, and they must be cautious in dealing with each other, but over many dealings they gain confidence in the other party's cooperative intentions. Many of the requirements of threat-induced trust can be relaxed at this stage. Here we have the true foundational ingredients of robust private ordering—signal-induced trust. Close allies are in a better position to forge new legal order as the trust deficit poses far less of a destabilizing threat. Signal-induced trust can in this manner enable private order to flourish.

Indeed, states sharing many treaties between them generate high levels of signal-induced trust. These agreements work together in a synergistic fashion. European Union member states, for instance, share such a high concentration of treaty interconnections that a very robust signal-induced trust exists between them, which infuses a powerful degree of stability into the legal order they create. The rational trust exhibited between close allies is predominantly signal-induced trust born from their multitude of treaties and successful cooperation games. From this durable foundation, international regimes may evolve and take root. Such regimes are paradigms of private order—legal order arising organically in the vacuum of an external authority. Treaty regimes are embryonic legal order flowering into resilient systems of private order. Countries forging cooperation through treaty are essentially the same as individuals establishing cooperation through contract. They require rational trust: first this may be threat-induced trust, but over time signal-induced trust can emerge, at which point private ordering can grow rapidly. In essence, close allies have been "doing business" with each other for a long time.

The thesis also suggests the possibility of a kind of legal engineering: treaties may intentionally be drafted so as to incorporate positive obligations in order to enhance their ability to generate private order. Indeed, the idea that

positive obligations maximize the potential for self-sustaining private order suggests an obvious opportunity for those who may wish to intentionally give rise to such order. For the most part, treaties already have the constituent ingredients of private ordering—i.e., specificity, signaling, and iteration—and therefore possess the potential to sustain themselves without third-party enforcement just as contracts between commercial parties do. This helps explain how treaty law is able to successfully flourish in the absence of a central authority. However, this may be taken further: by incorporating as many positive obligations as possible, treaties may be intentionally crafted so as to exploit this dynamic.

The implication of performance signaling theory in terms of treaties is clear: the more positive obligations the better. This insight has important implications for international law theory in general. Much study has been devoted to how legal order arises upon the international stage, notwithstanding the absence of enforcement mechanisms. In that it identifies a mechanistic underpinning that contributes to this emergence, performance-signaling theory may offer some unique explanatory potential in this regard. Indeed, much may be gleaned by conceptualizing public international law simply as an evolving system of private order.

CONCLUSION

In this Article I have sought to explain the crucial role of ongoing positive obligations in giving rise to systems of private order and apply this to the growth of public international law. I gave this dynamic a name: performance-signaling theory. The theory holds that where there is an abundance of ongoing positive obligations between specific parties, the possibility for private ordering rises substantially because it allows for clearer signaling, helping to generate trust. Trust that the other player will cooperate solves the prisoner's dilemma. Trust can arise where the threat of retaliation negates the benefit from cheating (threat-induced trust), but trust can also arise from parties repeatedly signaling their cooperative intentions. In the case of this second form of trust (signal-induced trust), the distinction between positive and negative obligations is critical because it determines the ability to signal clearly.

It is in fact a very intuitive point: the more two parties actively interact with one another the greater is the potential that a strong cooperative relationship will emerge upon which a system of stable rules can then develop—i.e., private ordering. We see this in the case of private individuals who frequently interact; it is true for commercial parties who have frequent dealings, and it is true even for state actors. Treaty-based law should be thought of as a form of contract-based private ordering, one able to emerge primarily because it assigns ongoing positive obligations between the participants. Public international law may be re-conceptualized as a system of

private ordering on a grand scale, propelled forward through the force of positive obligations. Treaties are essentially contracts between nations that allow private ordering to arise on an international level just as contracts do within long-term commercial relationships between individuals. Yet this insight should be obvious. After all, how else could legal order emerge on the international stage where there is no central coercive authority, but through the machinery of private order?