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Cyberspace, Sovereignty, Jurisdiction, and Modernism

JOEL P. TRACHTMAN*

INTRODUCTION

It is a bagatelle to accuse of modernism many of the scholars who consider issues of cyberspace law. These scholars often write as though the growth of cyberspace changes everything about sovereignty, the state, jurisdiction, and law—as though the rise of cyberspace somehow apocalyptically¹ destroys all these constructs. Furthermore, perhaps because the technology is so exhilarating, there is a tendency to claim that the changes we do observe in sovereignty, the state, jurisdiction, and law all are caused by cyberspace. Surely the end of the cold war, the rise of economic interdependence, other technological changes, and a host of historical causes must be considered alongside cyberspace. This essay attempts to assess the things that cyberspace actually changes and our ability to predict the results of these changes.

While reports of history's end have proven premature,² and the state will not readily wither away,³ the state is historically contingent and the powers of the state that we refer to as "sovereignty" have never been static. Technological advances, such as the development of cyberspace, give rise to new means of expression of our aspirations, including new allocations of power both to the state and to non-state entities. International law is the vehicle for revision of

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1. For a truly apocalyptic—but fantastic—view of the rise of cyberspace, see POUL ANDERSON, *HARVEST OF STARS* (1992).

2. FRANCIS FUKUYAMA, *THE END OF HISTORY AND THE LAST MAN* (1992). Of course, Fukuyama only reported history's end in a very narrow sense; however, the narrow claim of an end to ideological contention, while possibly true, does not indicate an end to history, but only an end to a particular dialectical struggle.

3. Marx predicted the withering away of the state with the arrival of socialism. The new medievalists make similar claims regarding the withering away of the state. This essay rejects the contention that the state, as an entity that integrates a number of governmental functions in a territorially-based structure, is soon for the junkheap of history. However, this essay also describes the contingency of the powers and governance structures of states. Finally, it is worth noting that the new medievalists dovetail with the legal scholars who hold out the *lex mercatoria* as a model for cyberspace law.

these allocations of power. This is not a reference to the new medievalism,⁴ which argues for its own simplified order without government, but rather a pragmatic and practically trivial reference to the inevitability of change, both technological and institutional. The argument that technological changes occurring today require the death of the state and its regulatory function proves too much. It is not the state that has died, but the long-moribund theory of absolute territorial sovereignty.

Nor does this essay refer to Anne-Marie Slaughter's "trans-governmentalism",⁵ which might be viewed as a kind of extended multimedia intergovernmentalism (but not as the pooled authority of transnationalism), and which seems to contemplate a static allocation of powers to the state combined with new, decentralized means for the state to interact with other states. While the phenomenon of increased transgovernmentalism certainly exists, and competes with transnationalism and more traditional intergovernmental international relations, transgovernmentalism is more an observation about the way states organize themselves for international relations than an observation about either the powers of the state itself or about the international legal order. Slaughter's transgovernmentalism is a related phenomenon regarding the distribution of powers to engage in international relations within the state. This essay calls for a recognition of institutional contingency, applicable to all institutions (including the state), and suggests how the rise of cyberspace may affect the institution known as the state, in both reality and theoretical perception.⁶

In this brief essay, which reflects upon Dean Henry Perritt's thoughtful evaluation of the relationship between technology and sovereignty,⁷ I depict the problem of sovereignty as a problem of institutional competence. The theoretical background of this perspective is the new institutional economics and law and economics. The relationship that I explore is that between the technical production frontier and the structural production frontier.⁸ These are the two components of the frontier of Pareto efficiency. In short, the technical

4. See Jessica T. Mathews, *Power Shift*, FOREIGN AFF., Jan.-Feb. 1997, at 50.

5. Anne-Marie Slaughter, *The Real New World Order*, FOREIGN AFF., Sept.-Oct. 1997, at 183, 184.

6. We must recognize that each particular state will be affected differently. However, this essay is too brief and lacking in empiricism to engage in a particular or comparative analysis. For a discussion of the relation between reality and theory in this context, see J.H.H. Weiler & Joel P. Trachtman, *European Constitutionalism and Its Discontents*, 17 NW. J. INT'L L. & BUS. 354 (1996-97).

7. Henry H. Perritt, Jr., *The Internet as a Threat to Sovereignty? Thoughts on the Internet's Role in Strengthening National and Global Governance*, 5 IND. J. GLOBAL LEGAL STUD. 423 (1998).

8. Guido Calabresi, *The Pointlessness of Pareto: Carrying Coase Further*, 100 YALE L. J. 1211 (1991). See also Douglass C. North, *A Framework for Analyzing the State in Economic History*, 16 EXPLORATIONS ECON. HIST. 249 (1979).

production frontier is set by our technological capabilities, while the structural production frontier is set by our institutional capabilities. Lawyers, at their best, work to expand the structural production frontier.

I. SOVEREIGNTY, TERRITORY, AND THE PROBLEMS OF JURISDICTION

A. *Who Cares About State Sovereignty?*

The problem many of us experience with sovereignty is not just a sophomoric idealism that contemplates “world federalism”, but is more complex, more respectable, and more durable. There are two different meanings of sovereignty. From my perspective, they are diametrically opposed.

Sovereignty is often objectionable when it is used as a conclusory epithet in discussions of the power of the state. I will refer to this meaning of sovereignty as “conclusory sovereignty.” This is the type of sovereignty about which Professor Louis Henkin is correct to exclaim, “away with the ‘S’ word.”⁹ Its natural law assumption of fixed, complete, and unassailable sovereignty has never been correct and is not correct today. It is surprising that this type of sovereignty has become a tenet of realist political scientists, and that it is often accepted also by positivist international lawyers. It is surprising because realists and positivists purport to be empiricists, and only a self-deceptive empiricist could find that conclusory sovereignty comports with the facts of our world. Realists and positivists would be embarrassed to find that it is they who are guilty of normative thinking, arguing that states “should” be accorded plenary sovereignty.¹⁰ Nor are the idealists and natural law theorists correct in the normative assertion that authority “should” be transferred to a world federalist government. Rather, the correct allocation of authority is dynamic, complex, and contingent. However, as will be seen below, there is a place in the world for sovereignty, and for the state.

9. Louis Henkin, *The Mythology of Sovereignty*, NEWSL. OF AM. SOC'Y OF INT'L L., Mar.-May 1993, at 1, 6-7.

10. Here, I simply concur with Perritt's observation that the “problem is not . . . with the Internet but with the realist perspective.” Perritt, *supra* note 7, at 425. However, as will become apparent below, I think that the liberal model that Perritt argues should replace the realist model has some problems of its own. In short, I am not convinced that liberalism supports an argument either for or against contingent sovereignty. Furthermore, Perritt's argument seems to be that sovereignty is capable of preservation, and worth preserving, by use of cyberspace technologies.

Since before the Treaty of Westphalia, the powers of the state have been contingent and must continue to be allowed to respond to changes in both our goals and our means of achieving those goals. New technologies change our means of achieving our goals, both technically and structurally. Sovereignty is both inescapable and welcome when it is used to refer to the powers we decide to assign the state (this type of sovereignty is referred to herein as “contingent sovereignty”). As mentioned above, international law is the sculptor’s tool in the hand of world history, constantly shaping and reshaping the state and other institutions. Of course, the state is also shaped and reshaped by its own law—by domestic law. It is in this sense that international law and domestic law are joined in a single project of social design.

Conclusory sovereignty is a zombie that lived only for a brief moment if at all. However, it haunts and perturbs our discourse, allowing unconsidered assertions of state power where state power is inappropriate and where power would be better dispersed to other units either below or above the state. We will not mourn the final burial of conclusory sovereignty; in fact, we should drive a stake through its heart by shunning its use in rational discourse.¹¹ On the other hand, contingent sovereignty—the group of powers society decides to assign to the state at any given moment and in any given circumstance—is important and, once determined, worthy of defense. That is, where it is the legitimate expression of people’s aspirations, contingent sovereignty deserves respect. Contingent sovereignty, and the respect for the community decisions it entails, is worthy of protection as a type of procedural justice based on liberal theory. In this way, we can ethically defend the sovereignty of a state that, in our view, may take actions that we find ethically objectionable. This liberal moral relativism is what allows us to live at peace in a world where individuals hold varied moral tenets.

Very often, the debate over cyberspace and sovereignty wrongly assumes that cyberspace attacks sovereignty. Here, Perritt is right to argue that cyberspace may be sovereignty-preserving, and my analysis below supports his project. However, I would add that cyberspace is neither clearly sovereignty-

11. However, even rational discourse must take account of the irrational in us all. See Weiler & Trachtman, *supra* note 6, at 380-85, stating that:

According to the multiple demos [peoples] concept suggested [therein], there is a recognition of both the force and the potential value in the survival of the traditional European nation-state imbued with the force of national identification, cultural differentiation, a vision in which the Tower of Babel dispersal was not a punishment but a blessing. The Eros of nationalism is, thus, recognized and approved.

Id. at 383.

demeaning nor clearly sovereignty-preserving: cyberspace today is neutral in the contention over the powers of the state. Those who purport to tell us whether cyberspace will, in the course of time, demean or enhance the powers of the state must fail, as this question cannot be answered in general or in advance, but must be answered as we evaluate and build particular institutions over time. In fact, our best hope is that it will be citizens, not scholars, who, by their political acts, will indicate when and how contingent sovereignty will change. The role of scholars and lawyers is to help citizens to imagine, evaluate, structure, and implement changes.¹²

Cyberspace is best viewed as a bulge in the technical production frontier. Our institutions, including contingent sovereignty, determine the extent to which we reach the limits of the technical production frontier. In addition, and more saliently, changes in the technical production frontier, especially in communications, modify the structural production frontier. They do so by modifying the transaction costs of different institutional structures. This means that not only does cyberspace facilitate private activity, but, as Perritt points out, it also facilitates government activity. Not only does technology strengthen the tools of government, but it can also strengthen the legitimacy of government through heightened transparency and democracy.

Furthermore, these technological changes affect the costs of achieving our preferences. Change in the cost of achieving preferences will differentially affect the extent to which we may satisfy some preferences and, more importantly, will affect the means used to achieve our preferences. This includes the question of whether we use the market or the state to achieve certain goals. We cannot predict the answer to this question simply by referring to cyberspace. Rather, the answer to the market versus state question is dependent upon the confluence of a complex set of variables. Even if all variables other than the development of cyberspace were held constant, the development of cyberspace itself includes several variables, perhaps contradicting one another,¹³ which must be evaluated separately before being aggregated to form an answer.

12. See ROBERTO MANGABEIRA UNGER, *WHAT SHOULD LEGAL ANALYSIS BECOME?* 113(1996).

13. I suggest below that the development of cyberspace may empower both the market and the state and, therefore, further analysis is required in order to determine which is empowered more in particular instances.

1. State Sovereignty and Individual Sovereignty

The perspective adopted here is “methodological individualism”,¹⁴ aligned with cosmopolitanism, or humanism, to make the individual’s aspirations, as expressed initially by the individual, the touchstone of positive and normative theory. Thus, the sovereignty of the state is derived from, and dependent upon, its utility to express the “sovereignty” of the individual.

How does cyberspace affect the relationship between individual sovereignty and state sovereignty? Certainly bidirectional communications are made more efficient, and therefore more frequent. Individuals may provide more information regarding their preferences to government through referenda, surveys, or market-mimicking mechanisms such as electronic highway toll collection. This information revelation function may serve to legitimate government action: it can be more strongly rooted in citizen preferences. On the other hand, as Perritt quotes Walter Wriston, information technology “enables the citizen to watch Big Brother.”¹⁵ The citizen can keep better track of government and thereby provide enhanced input as to the citizen’s preferences. This revolution in availability of information risks overwhelming the citizen: representative democracy has roots in efficiency. When Perritt argues that cyberspace strengthens sovereignty from the perspective of liberal theory,¹⁶ he must mean that cyberspace strengthens the expression of individual preferences in the sense described here.

Finally, it does not appear particularly useful to speak, as Reidenberg does, of the “sovereignty” of internet network systems.¹⁷ While the substantive point regarding the relative capacity and need for autonomy of such networks may, like the similar point regarding private corporations, be accurate, reference to powers similar to those accorded to states by conclusory sovereignty simply clouds the analysis by treating unlike things alike.

14. JAMES M. BUCHANAN, *EXPLORATIONS INTO CONSTITUTIONAL ECONOMICS* 24-25 (1989).

15. Walter B. Wriston, *Bits, Bytes and Diplomacy*, *FOREIGN AFF.*, Sept.-Oct. 1997, at 172.

16. Perritt, *supra* note 7, at 436.

17. Joel R. Reidenberg, *Governing Networks and Rule-Making in Cyberspace*, in *BORDERS IN CYBERSPACE: INFORMATION POLICY AND THE GLOBAL INFORMATION INFRASTRUCTURE* 84, 98 (Brian Kahin & Charles Nesson eds., 1997).

2. *Sovereignty and Territory*

Territoriality has many benefits, as well as costs, and may be an appropriate basis for allocation of jurisdiction in many circumstances. Territoriality is a type of formalism, and suffers from the same deficiencies as other formalist rules: underinclusiveness and overbreadth. However, under some circumstances, the costs of underinclusiveness and overbreadth may be less than the costs of unpredictability and adjudication in a greater number of cases.¹⁸ Conclusory sovereignty is often paired with conclusory territoriality: the assumption that prescriptive jurisdiction can and should be allocated based on the territoriality of conduct. Furthermore, conclusory sovereignty, with its unsustainable assertion of unconstrained state power, requires territoriality as a basis to cabin the separate omnipotencies of multiple states.

In fact, territoriality is the constraint that unravels the assertion of unconstrained state power.¹⁹ The myth of unconstrained state power fails horizontally because territoriality constrains it. Furthermore, the territoriality constraint is radically indeterminate. Since Walter Wheeler Cook's legal realist attack on the vested rights theory in the 1930s and 1940s,²⁰ conflict of laws scholars have known that simple assertions of territoriality often fail to answer questions of allocation of power.²¹ The assertion of unconstrained state power also fails vertically, because states at least agree on the existence of international law, including the international law rule that vertically limits each state's horizontal assertion of power on bases related to territory.²²

18. On the issue of formal rules versus standards, see Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257 (1974); Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L. J. 65 (1983); Kathleen M. Sullivan, *The Supreme Court, 1991 Term - Forward: The Justices of Rules and Standards*, 106 HARV. L. REV. 24 (1992); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L. J. 557 (1992); Gillian K. Hadfield, *Weighing the Value of Vagueness: An Economic Perspective on Precision in the Law*, 82 CAL. L. REV. 541 (1994); Ronald A. Cass, *Judging: Norms and Incentives of Retrospective Decision-making*, 75 B.U. L. REV. 941 (1995).

19. See *The Schooner Exchange v. McFaddon*, 11 U.S. (7 Cranch) 116 (1812).

20. See WALTER WHEELER COOK, *THE LOGICAL AND LEGAL BASES OF THE CONFLICT OF LAWS* (1942).

21. See, e.g., Joel P. Trachtman, *Conflict of Laws and Accuracy in the Allocation of Government Responsibility*, 26 VAND. J. TRANSNAT'L L. 975 (1994).

22. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 403 (1987).

3. *Sovereignty and Subsidiarity*

Sovereignty has both horizontal and vertical determinants.²³ A state's power vis-à-vis other states is the horizontal determinant. A state's power vis-à-vis substate and suprastate institutions (and individuals) is the vertical determinant. The vertical determinant is addressed by the concept of subsidiarity, which is often used, like sovereignty itself, as a conclusory epithet. The vertical allocation of plenary power to the state is also confounded by the inability to parcel out discrete powers horizontally. In order to manage a system where power cannot be allocated horizontally, states must share power through vertical structures. These vertical structures include the international legal order itself, as well as particular treaties, arrangements, and institutions by which states share power in the international legal system.

B. Territory and Cyberspace

It is not clear to me that “[c]yberspace radically undermines the relationship between legally significant phenomena and physical location.”²⁴ Did the telephone, telegraph, television, or mail do so? Are they different from cyberspace, other than in terms of frequency, velocity, and cost? Conduct still occurs in territory. Individuals still reside in territory. Most importantly to me, effects are still felt in territory.²⁵ Thus, while cyberspace may be a “supra-territorial” phenomenon that fractures both conduct and effects, supraterritoriality is not new, and conduct and effects have been fractured in the past. More importantly, the supraterritoriality of the medium only results in part in a supraterritorial society. Our problem is to determine to which society or societies regulation of a particular problem “belongs.” It is too easy to argue that regulation of cyberspace belongs to the cyberspace society. Why does not

23. See Joel P. Trachtman, *Reflections on the Nature of the State: Sovereignty, Power and Responsibility*, 20 CAN.-U.S. L.J. 399 (1994).

24. David R. Johnson & David G. Post, *Law and Borders: The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1367 (1996). See also Lawrence Lessig, *The Constitution of Code: Limitations on Choice-Based Critiques of Cyberspace Regulation*, 5 COMM. L. CONCEPTS 181, 184 n.23 (1997). “In cyberspace, because code is so plastic and so powerful, and because law is so feeble and (on an international scale) so rigid, code has a comparative regulatory advantage over law. A gap in legal regulation will therefore emerge, and code will fill that gap.” *Id.* at 184. Accord Joel Reidenburg, *Governing Networks and Rule-making in Cyberspace*, 45 EMORY L.J. 911 (1996). For a different view, and one that argues the technical feasibility of regulation in cyberspace, see Timothy S. Wu, Note, *Cyberspace Sovereignty?—The Internet and The International System*, 10 HARV. J.L. & TECH. 647 (1997).

25. On the other hand, effects are more dispersed today than they have been in the past, and cyberspace is an instrument of dispersion of effects.

regulation of telephone, television, financial services, or pollution also belong to a separate supraterritorial "society"?

The real jurisdictional novelty of cyberspace is that it will give rise to more frequent circumstances in which effects are felt in multiple territories at once. I find this development welcome from a theoretical standpoint because it finally makes apparent a truth that existed before the development of cyberspace: effects are rarely neatly cabined within particular jurisdictions. Therefore, the allocation of jurisdiction to a particular state is not simply a technical issue; rather, it necessarily involves distributional or political choices. Thus, for me, the development of cyberspace does not itself raise new problems, but frees us to think more clearly about problems of jurisdiction. However, as will be seen, the old problems are difficult enough. In fact, one may view the rise of cyberspace as a phenomenon that accentuates the old problems to a point where it is worthwhile to devise a more substantial institutional solution. Furthermore, while cyberspace accentuates the old problems, it also provides intriguing new potential solutions.

C. Problems of Jurisdiction

It is well recognized, by Perritt and others, that the central and most difficult legal issue in cyberspace is jurisdictional.²⁶ This jurisdictional issue is often recognized as a horizontal jurisdiction question: which state has prescriptive (or adjudicative or enforcement) jurisdiction over conduct in cyberspace? This issue is thought to arise from the fact that it is difficult to locate cyberspace conduct territorially. The latter fact arises from the dispersed nature of the computer network that comprises the Internet.²⁷ Two conflicting prescriptions, with the choice dependent on the tastes of the author, are generally made.

Prescription 1. The first prescription argues that because cyberspace cannot be neatly cabined in any single territory, and assuming that territoriality is

26. See Johnson & Post, *supra* note 24; Henry H. Perritt, *Jurisdiction in Cyberspace*, 41 VILL. L. REV. 1 (1996); Dan L. Burk, *Federalism in Cyberspace*, 28 CONN. L. REV. 1095 (1996).

27. For a description of the technical aspects of the Internet, see *ACLU v. Reno*, 929 F. Supp. 824, 830 (E.D. Pa. 1996), *aff'd*, 117 S. Ct. 2329 (1997).

the only basis for jurisdiction, no state should regulate cyberspace.²⁸ This argument is obviously nonsequacious. Furthermore, it proves too much. Nothing can be neatly cabined in any single territory. If we throw up our regulatory hands simply because we cannot establish territorial categories, the result would be anarchy. While this may be congruent with the new medievalism, and with the Chicago school (and socialist) vision of the state, many of us still see a role for government.

Prescription 2. The second prescription, based on the same factual predicates, argues for global government. This global government may be described on three parameters. On the first parameter, it may have rules for allocation of jurisdiction among governments. On the second parameter, it may harmonize rules. On the third parameter, it may create centralized organizations to engage in rulemaking and enforcement activities. Like the first prescription, the second is a nonsequitur: the failure of territoriality indicates neither anarchy nor global government.

It is my contention that these two opposing choices are insufficient. It is obvious that not everything is for the market, as it is obvious that not everything is for international governance, just as it is conversely obvious that not everything is for the state. However, some things are bound to remain for the state, while some things are for the market and other things are for international governance. This is the true meaning of subsidiarity, and it leaves us in the existential position of having to analyze and choose, rather than being able to conclude debates by simple epithets.

For now, it is enough simply to dissent from the modernist approach to regulatory jurisdiction that holds that cyberspace presents jurisdictional challenges unseen before. There have never been many issues that one country can completely deal with on its own; cyberspace simply accelerates the realization of this fact. The development of cyberspace will only change our jurisdictional lives incrementally, and should not be viewed as a revolution that marks radical changes in our legal relationships. Nor should the development of cyberspace be viewed as a basis for either allocation of all social decisions to the market, or allocation of all social decisions to international governance. Below, I discuss the complex and contingent problem of discriminating among these choices in particular circumstances.

28. For an exposition of this argument, and a suggestion that spontaneous, or at least private ordering will arise, see Johnson & Post, *supra* note 24.

Finally, I see more possibilities than Perritt does for cooperation among states to establish rules of prescriptive jurisdiction, harmonized laws, and international organizations to apply these rules. Many recent initiatives in international regulation and in the trade arena have done exactly this. I also see possibilities for new laissez-faire regimes such as tax-free and tariff-free transfer of electronic data in cyberspace, but I do not understand why one would argue, as David Johnson and David Post do, that all of cyberspace should be free of state-bound law.²⁹

II. THE THEORY OF THE INTERNATIONAL ORGANIZATION, THE THEORY OF THE STATE AND THE THEORY OF THE FIRM: TOWARD COMPARATIVE INSTITUTIONAL ANALYSIS

This section develops a theoretical context for evaluating the effects of cyberspace on the horizontal and vertical allocation of jurisdiction.

Coase developed the theory of the firm³⁰ to analyze why firms exist and, if they should exist, why there is not just one all-encompassing firm. If we think of the state or an international organization as simply a bigger version of a firm, it becomes apparent that Coase's theory of the firm is equally applicable to the state and to the international organization.³¹

Coase explored the dichotomy between transactions in the market and allocational decisions within the firm. This dichotomy may be understood as a kind of institutional choice: which structure better allows people to produce more of what they want? The institutional choice may, however, be broadened to include not only the market and the firm, but also the state.³² I have proposed the further extension of this choice to the international organization. Thus, institutional choice may begin with a determination of whether the particular issue is best addressed by the market, the firm, the state, or an international organization. Of course, this is only the beginning of analysis, as there are many variations in the size, structure, and governance of each of these types of

29. *Id.*

30. RONALD COASE, *THE FIRM, THE MARKET AND THE LAW* 95-185 (1988) (incorporating and commenting upon earlier work, including Coase's seminal articles: *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937) and *The Problem of Social Cost*, 3 *J.L. & ECON.* 1 (1960)). See also Ronald Coase, *The Nature of the Firm: Influence*, 4 *J.L. ECON. & ORG.* 33, 33 (1988).

31. See Joel Trachtman, *The Theory of the Firm and the Theory of the International Economic Organization: Toward Comparative Institutional Analysis*, 17 *Nw. J. INT'L L. & BUS.* 470 (1997).

32. See, e.g., NEIL KOMESAR, *IMPERFECT ALTERNATIVES* (1994).

entity. Moreover, these structures always coexist and interrelate in subtle and complex ways.

Côase postulated that the choice of structure is based on transaction costs, and Oliver Williamson has taken up this argument.³³ It is critical to recognize that transaction costs can only be determinative if transaction gains and losses are otherwise equal; however, they almost never can be held equal. Therefore, the choice of institutional structure will be determined so as to maximize the positive sum of transaction gains, transaction losses, and transaction costs. The choice of a particular institutional structure, such as the regulation of securities transactions, will be dependent upon the broader institutional context. By the broader institutional context, I mean the kinds of business structures, regulatory structures, courts, and international organizations already existing. Therefore, the maximization process is subject to path dependency, and is like the work of a ship's carpenter, who replaces a plank at a time, ensuring that each plank fits into its place in the vessel, and over time replaces the entire ship.³⁴ Finally, this maximization process is subordinate to the question of what is to be maximized. Methodological individualism indicates that individual preference (including, *inter alia*, consumption preferences and moral tenets) is the source of the values to be maximized.

III. THE CHANGING TRANSACTION COSTS OF GOVERNANCE

A. What's New in Cyberspace?: The Extension of the Technical Production Frontier

It is important to evaluate the changes wrought by the rise of cyberspace.³⁵ As we evaluate the choice between the state and the international organization as loci of power, we must give cyberspace its due: cyberspace works on the transaction costs side of the market, the state, and the international organization. It is here that the role of cyberspace may be viewed as revolutionary. Let us briefly enumerate the types of effects cyberspace may have on the information economics of governance. Before we examine some real effects, however, it is worth noting one alleged effect that is worth disputing. This is the argument

33. See OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 22 (1985).

34. Robert D. Cooter, *The Best Right Laws: Value Foundations of the Economic Analysis of Law*, 64 NOTRE DAME L. REV. 817, 822 (1989).

35. See I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace"*, 55 U. PITT. L. REV. 993, 995 (1994).

that cyberspace is not technically susceptible to regulation.³⁶ There is nothing to this argument: anything wrought by the mind of man is capable of regulation by the mind of man.³⁷ While there may be a lag between the private initiative and the regulatory response, again, this is not peculiar to cyberspace. Finally, cyberspace may raise the costs of regulation to the point where it is inefficient to regulate, but it has not been demonstrated that this is the case and, at least in theory, one would expect the technological miracles that enable cyberspace also to enable its regulation.

First, cyberspace may tend to convert information from a private good to a public good. In economic theory, public goods are goods that are characterized by two attributes: nonrivalry and nonexcludability of consumption.³⁸ Nonrivalry means that one person's consumption does not diminish the amount available to others. While servers lack truly unlimited capacity, and America Online subscribers during certain periods may well disagree, information in cyberspace is largely characterized by nonrivalrous consumption. Nonexcludability refers to the relative ease or difficulty of preventing consumption by those who do not pay for the resource. Cyberspace is currently struggling with this problem, which is itself a transaction costs problem: what is the cost of excluding nonpayers?³⁹ Thus, while the analysis is neither complete nor conclusive, cyberspace tends to convert information from a private good to a public good. On the other hand, for those who have followed the battles over intellectual property rights in international trade, it is clear that even information that is ordinarily distributed in physical form already has public goods characteristics. Simply put, the rise of cyberspace seems to accentuate these characteristics.

Second, cyberspace makes the exchange of information faster and cheaper. This is the reason for the rise of commerce on the Internet: both commerce in

36. See, e.g., Perritt, *supra* note 7, at 423-35. The counterexamples given by Perritt are China and Singapore. *Id.* at 429.

37. See A. Michael Froomkin, *The Internet as a Source of Regulatory Arbitrage*, BORDERS IN CYBERSPACE, *supra* note 17 (explaining why it is currently difficult for governments to regulate content). Amy Harmon, *Technology to Let Engineers Filter the Web and Judge Content*, N.Y. TIMES, Jan. 19, 1998, at C1 (discussing a technological means to regulate the Internet).

38. Richard Musgrave defined public goods by reference to their characteristics of nonexcludability and nonrivalry. RICHARD MUSGRAVE, *THE THEORY OF PUBLIC FINANCE* (1959). Perritt discusses this issue in detail in Henry H. Perritt, Jr., *Property and Innovation in the Global Information Infrastructure*, 1996 U. CHI. LEGAL F. 261, 267-68 (1996).

39. However, it seems premature to herald the end of intellectual property. Consistent with the main argument of this essay, it may be said that the same technologies that challenge the protection of intellectual property rights provide the tools for enhancing protection.

physical goods and commerce in information goods. These technological advances are growing geometrically, and as enterprises realize their utility and establish network externalities by exploiting their utility in greater numbers, they will substantially decrease the cost of transacting. This decrease in the cost of transacting will have the effect of increasing the number of transactions effected.

Third, information will flow more cheaply to both the customer and the wholesale purchaser of goods and services, enabling information also to flow more cheaply from the purchaser to the seller. This will give rise to new forms of targeted advertising, as well as targeted product development.

Finally, and critically for our topic, if one thinks of government as a provider of goods and services,⁴⁰ then there is no reason that government cannot have the same transaction cost reduction benefits enjoyed by the private sector. This observation supports Perritt's insight that government functions can be enhanced by cyberspace. As Wriston says (and Perritt quotes), not only can Big Brother watch us, but we can watch Big Brother,⁴¹ and communicate with one another. The theoretical core of this idea, and its possible extension, is that enhanced communication can allow citizens to more easily coordinate autonomously, without the intercession of formal governance. The citizenry may more readily organize spontaneously to supervise government, and thereby partially displace government as an independent decisionmaker. This is a fundamental change, and will be discussed further in Part V. However, note here that this story is incomplete, for, while the transaction costs of spontaneous governance may be diminished, the strategic problems that may prevent spontaneous governance may actually be increased. That is, with reduced transaction costs, the cost of holdout-type conduct—and the collective action problem—may be increased. Thus, cyberspace is a technical production frontier development that has dramatically reduced the transaction costs of coordination in both the private sector and the public sector.

B. The Structural Production Frontier

The structural production frontier is the place for institutional design. "Institution" refers at least to both organizations in the public and private sector and to the rules of law and contract that govern relations over time. With the

40. See generally DAVID OSBORNE & TED GAEBLER, *REINVENTING GOVERNMENT* (1992) (providing various views of the role of government).

41. Wriston, *supra* note 15, at 172.

reduction of transaction costs by advances on the technical production frontier, what will be the reaction on the structural production frontier?

On the structural production frontier, we create institutions to facilitate social relations—to maximize net gains, from the benefits and costs of social relations.⁴² In a market context, we refer to many types of social relations as transactions, and indeed the transaction is the basic unit of institutional economic analysis. The choice of institutions is determined by choosing the structure that maximizes social gain.⁴³ If the rise of cyberspace differentially reduces the transaction costs implicated by various institutional structures, then it will affect the choice of institutional structure.

However, the suggestion that the rise of cyberspace will result in a victory of the market over the state, the international organization over the state, or the state over either of the others, makes an unwarranted assumption about the transaction cost profiles of the relevant institutions. Rather, to take an extreme example (and one to which I do not personally adhere), it might be that empirical investigation shows that cyberspace does not empower the market significantly, but that it has finally provided the kind of dense information exchange network that will allow socialism—state control of most economic activity—finally to flourish. While we may not agree that the age of cyberspace is the age of socialism, we may not be ready to accept the opposite argument: that the age of cyberspace necessitates the death of the state.

Rather, particularism still rules. Although the world has changed, and transaction costs have been reduced, the world has never stopped changing, and transaction costs have generally been reduced continuously throughout history. We know that social relations—transactions—have become less costly, and so we can expect them to become more dense: more frequent and more complex. This is why property rights are more complex and disputes more frequent than in the past. This is why international relations is more complex and varied. Anne-Marie Slaughter is correct to observe that governments relate through many means on many levels, to a greater extent than in the past.⁴⁴ Her picture is incomplete without also recognizing that the private sector now relates across borders more extensively, and business-government relations in cross-border enterprise is also more extensive and complex. Slaughter's picture should not

42. For an extended analysis of this formulation, see Trachtman, *The Theory of the Firm and the Theory of the International Economic Organization*, *supra* note 31, at 470.

43. KOMESAR, *supra* note 32.

44. Slaughter, *supra* note 5, at 184-85.

be interpreted to exclude government-government relations that are institutionalized through treaty or international organization. It is a great time to be a lawyer, or any kind of professional in the business-business, business-government, or government-government transaction costs engineering sector: there is more work in these areas than ever in the past, especially in cross-border relations. However, except for brief periods of retrenchment, this has been a general historical trend.

C. Cyberspace and Jurisdiction

Thus, the only learning we can really derive from the rise of cyberspace is that our methods of social relations will merit reexamination given the availability of these new methods of communication. One area that will certainly merit reexamination is the allocation of prescriptive jurisdiction. States have tried to resolve disputes over control of the commons, or of people, by reference to formal concepts such as sovereignty, territoriality, and extraterritoriality, but these concepts grow increasingly indeterminate. More importantly, even where determinate, they increasingly provide unsatisfactory responses to complex social problems.

It is in this area that cyberspace has helped us, by educating us to the disutility of concepts of sovereignty, territoriality, and extraterritoriality. Cyberspace has demonstrated the incompleteness of our social response to problems of jurisdiction, and has therefore made it incumbent upon us to revise it. In Part IV, I present some perspectives on revising our approach to the problem of jurisdiction.

D. Path Dependence, Network Externalities, and the Advantage of the State

There are several reasons why the state as a social institution still has some life. First, the state already exists and has proven itself capable of a degree of adaptation. The state could only be discarded over a long period of time or in a short paroxysm of world federalism or anarchy; the latter is unlikely because of the high transition costs it would entail. The state is equally unlikely to be discarded over a long period of time, just as local community governments have not been discarded. Rather, the state is likely to retain many of its current functions indefinitely, while some functions are delegated to regional, international, or transnational organizations and, for other reasons, other functions are derogated to substate or nongovernmental entities.

The delegation and derogation of functions would be expected to follow from various efficiency, transaction costs, and strategic considerations.

Superimposed on these considerations is path dependence: the observation that the institutional framework that currently exists fits into a wider institutional structure, and that there are transition costs that may constrain changes that would otherwise be indicated by efficiency, transaction costs, and strategic considerations. In addition to path dependency based on preexisting institutional structures, path dependency may be based on game theory principles, resulting in institutional outcomes that are inefficient even given their institutional context.

A related reason for the durability of the state is network externalities. Because many states exist, the state may be viewed as a standard structure. The very standardization of this structure makes its use easier; for example, in some contexts it may be easier for states to relate to one another than for many different kinds of nonstate entities to relate to one another. It is for reasons of network externalities that a standard basket of state powers—a standard definition of sovereignty—may be useful. Therefore, it is incorrect to examine only the particular circumstances of individual states. Rather, in order to determine the content of contingent sovereignty in particular circumstances, it will be necessary to examine the content of contingent sovereignty in general. As a practical example, one might consider the power to make treaties. If all other states have the power to enter into treaties without referenda, the state that imposes a requirement for a referendum may find itself left out of negotiations, or may have to make inordinate concessions to compensate for its idiosyncrasy. Under such circumstances the state may give up its divergent structure.

IV. EVEN PARANOIDS HAVE ENEMIES: THE PROBLEM OF JURISDICTIONAL MISMATCH

Our fear of cyberspace is not wholly unwarranted. One dark side of cyberspace is its facilitation of private sector jurisdictional evasion and, at least in some contexts, its facilitation of regulatory arbitrage.⁴⁵ Jurisdictional evasion might consist, for example, of securities fraud aimed into the United States from a website that is based at an offshore server. How is this different from a telephone call aimed into the United States from an offshore “boiler room”

45. Another dark side of cyberspace is its potential for state intrusion in the sphere of the individual, toward totalitarianism.

practicing securities fraud?⁴⁶ It is not terribly different in jurisdictional terms, although there are important distinguishing features.⁴⁷ The United States has legal rules, like the effects doctrine,⁴⁸ that address such offshore conduct.⁴⁹ While it may be argued that any act anywhere has some localized effect somewhere, the effects doctrine has always been selective and may grow more selective in the future. The rise of cyberspace may prompt greater selectivity, as a message posted on the internet may have effects everywhere. From an economic standpoint, the role of jurisdictional rules is to internalize externalities to the extent desired or alternatively to provide clear allocations of jurisdiction so that it may be reallocated through transactions among states.⁵⁰

There are times when it is useful to internalize externalities, and there are times when it is useful to constrain regulatory arbitrage.⁵¹ When the jurisdictional rules actually applied fail, we can refer to a jurisdictional mismatch, or gap. This type of jurisdictional mismatch—a mismatch between the actual governance structures and the governance structures that would allow states to achieve the internalization and regulatory arbitrage outcomes they desire—may be viewed as a lag in the structural production frontier. That is, the social institutions for allocation of jurisdiction have not changed to reflect the technological changes brought by the rise of cyberspace. Why have they not changed? Perhaps there are transition costs, based on path dependence or

46. On the effect of cyberspace on securities regulation, see John C. Coffee, *Brave New World?: The Impact of the Internet on Modern Securities Regulation*, 52 BUS. L. 1195 (1997).

47. Perhaps unlike a single telephone call, the Internet involves retrieval of data on a “giant network which interconnects innumerable smaller groups of linked computer networks.” *ACLU v. Reno*, 929 F. Supp. 824, 830 (E.D. Pa. 1996), *aff’d*, 117 S. Ct. 2329 (1997). Thus, there are significant factual differences, but the jurisdictional crux of the matter is that the Internet serves, like the telephone network, as an instrument of cross-border transmission of information.

48. The best statement of the rationale for the effects test is articulated by Judge Wilkey in the *Laker* case: “Certainly the doctrine of territorial sovereignty is not such an artificial limit on the vindication of legitimate sovereign interests that the injured state confronts the wrong side of a one-way glass, powerless to counteract harmful effects originating outside its boundaries which easily pierce its ‘sovereign’ walls, while its own regulatory efforts are reflected back in its face.” *Laker Airways Ltd. v. Sabena, Belgian World Airlines*, 731 F.2d 909, 923 (D.C. Cir. 1984). See also Joel P. Trachtman, *Externalities and Extraterritoriality: The Law and Economics of Prescriptive Jurisdiction*, in *COMPARATIVE ASPECTS OF INTERNATIONAL LAW* (Alan Sykes & Jagdeep Bhandari eds., forthcoming 1997).

49. Thus, it seems beside the point to say that “the Internet network . . . is beyond the jurisdictional reach of any centralized political or legal authority . . .” Coffee, *supra* note 46, at 1201 (citations omitted). Of course, the entire network is not encompassed within any single state’s power, just as the entire worldwide telephone, or book publishing network is not so encompassed. However, this assertion hides the real complexity of the question of how jurisdiction is indeed allocated today and how the allocation might be changed in response to the rise of cyberspace.

50. See Trachtman, *Conflict of Laws and Accuracy in the Allocation of Government Responsibility*, *supra* note 21, at 975. See also Trachtman, *Externalities and Extraterritoriality*, *supra* note 48.

51. See Weiler & Trachtman, *supra* note 6 (exploring these phenomena as reasons states may cooperate in international economic affairs).

network externalities, that form barriers to change. If so, the failure to change may be viewed as efficient from a global perspective, if not from a narrower perspective of the particular context. Perhaps the value of change has simply not been recognized. It is in this sense that lawyers, as structural production frontier workers, may help to identify potential revised structures that may be adopted for greater benefits.

For those, like Perritt, who believe that the Internet discriminates against totalitarian regimes and in favor of liberal democracies, it is necessary to show why dissemination of pornographic or Nazi materials is less a threat to the liberal democracies than dissemination of democratic or dissenting materials is to totalitarian regimes. It is also necessary to show that totalitarian regimes are technologically incapable of regulating the dissemination of material they find objectionable. Far from being the friend of free speech, the Internet may be the ideal mechanism for supervision of speech. Thus, cyberspace may hold the potential to be a diabolical tool of totalitarian control, allowing the state finally the technological means to keep track of what its citizens are saying, reading, buying, and, through computer analysis of large amounts of information, thinking. Thus, while the Internet may, as Perritt says, indeed be a powerful engine of open government, it may also be a powerful vehicle of the closed society, providing finally the technological means to attack individuals' heretofore private lives.

It must be concluded that cyberspace, like other technologies, is a two-edged sword, equally sharp on both sides. It both attacks and preserves sovereignty, and it does not discriminate against totalitarians.

V. A FURTHER RELATIONSHIP: SPONTANEOUS ORGANIZATION, SELF-CONSCIOUS ORGANIZATION, THE LAW MERCHANT, AND THE NEW MEDIEVALISM

Law cannot exist separate from society. Social rules arise in varying circumstances, and for varying reasons. The distinction between a social rule and a law is that law relies on the backing of government. The backing of government is useful in many circumstances in order to overcome problems of collective action and transaction costs that might otherwise prevent the formation of a useful social rule. However, as shown above, there is no reason to think that the rise of cyberspace will necessarily reduce these utilities.

The *lex mercatoria* did arise in circumstances somewhat insulated—and permitted by princes to be so insulated⁵²—from feudal law. Autonomous rulemaking can be a transnational solution to the problem of separate states with separate legislative processes.⁵³ We see this in the work of the International Chamber of Commerce. States continue to facilitate this type of private ordering by enforcing choice of law and forum clauses in private contracts.⁵⁴ Such autonomous rulemaking can avoid barriers presented by different sovereign states that may not be able to agree on government-provided rules that have the efficiency or flexibility of rules that are more socially immanent. Thus, as Perritt points out, cyberspace may serve as an ally of transnational cooperation.⁵⁵ However, cyberspace empowers transnationalism every bit as much as it empowers transgovernmentalism and even internationalism. The open question, which requires further and particular analysis, is where will each be used?

CONCLUSION

The rise of cyberspace will not destroy the state. In fact, as Perritt points out, cyberspace may strengthen the powers of the state as well as demean them. The point is that each allocation of power must be considered more particularly. This essay considers cyberspace as a technical change that modifies the transaction costs and benefits profile of various social and private arrangements. Once this shift is recognized, it is important to consider how these social and private arrangements might be changed, and whether some social arrangements should be made private, or vice-versa. The complex feedback between the technical production frontier and the structural production frontier makes prediction of outcomes daunting. Jurisdiction and sovereignty were always constructed; the rise of cyberspace is simply an occasion for their revision.

Recall that there are two types of sovereignty: the zombie conclusory sovereignty and the less determinate, but living, contingent sovereignty. The difference between the two is one of institutional imagination. Conclusory

52. See WYNDHAM A. BEWES, *THE ROMANCE OF THE LAW MERCHANT* 15-25 (1923).

53. See David G. Post, *Anarchy, State, and the Internet: An Essay on Law-Making in Cyberspace*, 1995 J. ONLINE L. 3, para. 6-11, available at <<http://www.law.cornell.edu/jol/post.html>>.

54. There is a consistent pattern of U.S. Supreme Court precedent creating a special space for international commerce, in which private persons have greater choice of legal regimes. See, e.g., *Mitsubishi Motors v. Soler Chrysler-Plymouth*, 473 U.S. 614 (1985) (discussing choice of arbitration and choice of law); *Bremen v. Zapata Offshore Co.*, 407 U.S. 1 (1972) (discussing choice of court forum).

55. Perritt, *supra* note 7, at 440-41.

sovereignty denies the plasticity of the institution of the state, while contingent sovereignty embraces it. More importantly, contingent sovereignty accepts the power and authority of people to mold the powers of the state as they see fit from time to time: it is more democratically rooted than conclusory sovereignty.

