Is Open Source Software the New Lex Mercatoria?

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INTRODUCTION

The first generation of academic scholarship on the Internet proclaimed that its transnational nature rendered it inherently unregulable by conventional governments. Instead, the Internet would be governed by rules and customs developed by members of the online community itself.[1] Although most of these early Internet theorists remained somewhat vague about the mechanism through which such norms and structures might arise, some suggested that they might emerge through international standard setting organizations or the system for resolving domain name disputes.[2] As a model for how such system might emerge, they pointed to the lex mercatoria, which is generally characterized as a set of uniform legal principles developed during medieval times on behalf of traveling merchants that was based on the customs and practices of international trade, enforced by special merchant courts, and independent of local governments and their laws.[3]

Other scholars expressed skepticism about the Internet's supposed unregulability.[4] Indeed, such claims would ultimately be contradicted by events such as the United States' unilateral efforts to block the creation

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1. For the leading scholarly exposition, see David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367, 1387–91 (1996). For a somewhat polemical statement of this position, see John Perry Barlow, A Declaration of the Independence of Cyberspace (Feb. 8, 1996), http://homes.eff.org/~barlow/Declaration-Final.html.

2. *See* Johnson & Post, *supra* note 1, at 1388 (domain name disputes); Joel R. Reidenberg, *Lex Informatica: The Formation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553, 586–87 (1998) (standard setting organizations).

3. Perhaps the leading proponent of this position is Reidenberg, *supra* note 2, at 553–55. For earlier articles advancing similar arguments, see Anne W. Branscomb, *Overview: Global Governance of Global Networks*, *in* TOWARD A LAW OF GLOBAL COMMUNICATIONS NETWORKS 1, 21 (Anne W. Branscomb ed., 1986); Paul Frissen, *The Virtual State: Postmodernisation, Informatisation and Public Administration*, *in* THE GOVERNANCE OF CYBERSPACE 111 (Brian D. Loader ed., 1997); I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace,"* 55 U. PITT. L. REV. 993, 1019–21 (1994); Johnson & Post, *supra* note 1, at 1389–91; Aron Mefford, *Lex Informatica: Foundations of Law on the Internet*, 5 IND. J. GLOBAL LEGAL STUD. 211 (1997); Henry H. Perritt, Jr., *Cyberspace Self-Government: Town Hall Democracy or Rediscovered Royalism*, 12 BERKELEY TECH. L.J. 413, 461–63 (1997); Matthew R. Burnstein, Note, *Conflicts on the Net: Choice of Law in Transnational Cyberspace*, 29 VAND. J. TRANSNAT'L L. 75 (1996).

4. *See, e.g.*, LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 24–60 (1999); Jack L. Goldsmith, *Against Cyberanarchy*, 65 U. CHI. L. REV. 1199 (1998).

of the .xxx domain on the Internet,[5] the influence of governments and large corporations over international standard setting organizations,[6] as well as China's success in restricting the online activity of its citizens.[7]

These failures have done little to dampen the desire for a conceptual foundation for Internet self-governance. Interestingly, Internet guru Lawrence Lessig has suggested that more widespread use of open source software may increase the Internet's ability to resist governmental control.[8] This Article explores potential implications of that observation by examining whether more widespread use of open source software might provide the basis for the type of bottom-up ordering associated with the lex mercatoria. Part I offers an overview of open source software. Part II describes both the ancient and modern versions of the lex mercatoria and outlines some of the central debates about those institutions. Part III examines whether open source software can provide a decentralized mechanism for unifying the online commercial environment that is independent of national governments and international organizations in the manner that the proponents of the lex mercatoria envision. Perhaps unsurprisingly, a system of self-governance based on open source runs afoul of the same questions of spontaneity, universality, and autonomy that surround the lex mercatoria.

I. WHAT IS OPEN SOURCE SOFTWARE?

Open source software is one response to the growing importance and complexity of modern computer processing and networking.[9] Computer programs generally exist in two forms. The first is known as "source code," which is written in a programming language, such as C, Pascal, or Fortran. Although source code is quite technical, experienced programmers can read and modify it intelligibly. Source code is then compiled into "object code" or "machine language," which is expressed as a

5. *See* Christopher Rhoads, *Red-Light District: Plan for Adult Area Sparks a Fight on Control of Web*, WALL ST. J., May 10, 2006, at A1 (describing criticism of U.S. involvement in ICANN's rejection of the .xxx domain).

6. *See* Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 CONN. L. REV. 1041, 1063 (1996) (describing how private entities can influence standard setting processes).

7. *See* Lawrence B. Solum & Minn Chung, *The Layers Principle: Internet Architecture and the Law*, 79 NOTRE DAME L. REV. 815, 895–910 (2004) (describing "the Great Firewall of China").

8. *See* LESSIG, *supra* note 4, at 6–8, 20–21, 100–08.

9. For an excellent overview of open source software, see Ronald J. Mann, *Commercializing Open Source Software: Do Property Rights Still Matter?*, 20 HARV. J.L. & TECH. 1, 10–21 (2006).

series of 0s and 1s. Object code can be read by computers, but cannot easily be deciphered by human beings.

Most software companies protect their work by only distributing their software in object code and by refusing to release the source code. In addition, software companies usually copyright the code that they distribute and include terms in the copyright licenses prohibiting customers from making any unauthorized copies or modifications. The absence of the source code and the contractual restrictions on modifying the code make it difficult for end users to diagnose and resolve incompatibility problems. Increases in the number and diversity of applications and peripheral devices run by end users, the growth in the number of connections between computers made possible by the Internet, and the greater integration of applications and network functions has made this problem all the more acute.

The open source movement attempts to solve these problems in two ways. Open source software is copyrighted and then distributed under licenses—the most prominent of which is the GNU General Public License (GPL)—that require that software be distributed with its source code or that the source code be made available on request for a period of three years. In addition, open source licenses leave follow-on developers free to use or modify the software as they see fit, provided that these modifications are clearly described and made available to others on an open source basis. In so doing, open source software embraces the vision that collective and cooperative efforts by multiple individuals represent the best approach for producing and improving code.[10]

Open source licensing has proven to be quite effective in organizing the development of certain software. The leading success story of the open source movement is a nonproprietary operating system known as GNU/Linux, which began in the early 1980s when a change in computer hardware rendered obsolete an operating system that had been collectively developed by the staff of the Artificial Intelligence Laboratory at the Massachusetts Institute of Technology.[11] A staff member named Richard Stallman chafed at the prospect of working on a computer with

10. For the leading academic exposition of the merits of open source software, see YOCHAI BENKLER, THE WEALTH OF NETWORKS 59–127 (2006).

11. The description that follows is based in large part on Stallman's own account of the origins of the open source movement. *See* Richard Stallman, *The GNU Operating System and the Free Software Movement*, *in* OPEN SOURCES: VOICES FROM THE OPEN SOURCE REVOLUTION 53 (Chris DiBona et al. eds., 1999), *available at* http://www.gnu.org/gnu/thegnuproject.html.

a proprietary operating system that he could not change. Instead, he resigned his position at MIT and began to lead the development of a Unix-compatible operating system called GNU in January 1984. By 1990, Stallman and his associates had completed all of the major components of the operating system except the kernel, which is the part of the operating system that interfaces with the computer's hardware. In 1992, a Norwegian student named Linus Torvalds released a Unix-like kernel he dubbed Linux and invited anyone to integrate it into an operating system. Stallman combined Torvalds's work with this own to form GNU/Linux, which has emerged as the leading alternative operating system to Microsoft Windows. Stallman also founded the Free Software Foundation in 1985 to support the open source movement and to raise funds to support the development of GNU. Other prominent success stories include the Apache software, which is employed by most web servers, and the Firefox web browser by Mozilla, which has emerged as the leading competitor to Microsoft's Internet Explorer web browser.

II. WHAT IS LEX MERCATORIA?

Although some trace the lex mercatoria back to Roman times, the conventional narrative begins in the Middle Ages, when trade fairs began to play an important role in the resurgence of international commerce.[12] The itinerant merchants who traveled among these fairs grew increasingly frustrated with the nonuniformity of the laws that they confronted as they traveled from jurisdiction to jurisdiction, as well as the local judges' lack of commercial sophistication. To address these concerns, these traders spontaneously developed a uniform set of principles to resolve disputes among them. By mutual agreement, disputes between traders that arose under the law merchant would be resolved in special merchant courts run by the merchants themselves, which dealt with complex technical matters in a relatively informal and expedient manner. These courts derived their authority not from the coercive power of the state, but rather from the fact that the contract specified that the merchant courts would resolve any disputes between the parties. Traders who attempted to breach this agreement would find themselves ostra-

12. For overviews of the early history of the lex mercatoria, see HAROLD J. BERMAN, LAW AND REVOLUTION: THE FORMATION OF THE WESTERN LEGAL TRADITION 332–56 (1982); LEON E. TRAKMAN, THE LAW MERCHANT: THE EVOLUTION OF COMMERCIAL LAW 7–21 (1983); Bruce L. Benson, *The Spontaneous Evolution of Commercial Law*, 55 S. ECON. J. 644, 646–51 (1989).

cized by the other members of the merchant community. The content of these principles was independent of local law as well as other universal systems of rules like Roman Law, rediscovered and taught in European universities since the eleventh century, and Canon Law, the universal law of the Catholic Church.[13] It was based instead on the prevailing customs and practices of the trade. As a result, the lex mercatoria reflected the collective wisdom of the entire trading community distilled from the bottom up in the manner envisioned by Friedrich Hayek,[14] rather than being the conscious creation of any person or sovereign.

Over time, nation states began to regard the independent, merchant-centered authority provided by the lex mercatoria as a potential threat to their political power. Thus, during the course of the nineteenth century, the lex mercatoria was absorbed into national law. In civil law countries, the principles previously governed by the lex mercatoria were incorporated into commercial codes. In common law countries (particularly England), the view that the lex mercatoria was part of customary transnational business law and "not a law established by the sovereignty of any Prince"[15] gave way as merchant courts were dissolved in favor of national common law courts. The attitude driving this shift of power away from the lex mercatoria is perhaps epitomized by the admonition that "[m]erchants ought to take their law from the courts and not the courts from the merchants; and when the law is found inconvenient for the purpose of extended commerce, application should be made to parliament for redress."[16] The progressive nationalization of the lex mercatoria left it largely forgotten and reduced to a matter of legal history rather than an independent source of law.

The modern resurgence of the lex mercatoria can be traced mainly to the 1960s.[17] In an international symposium held in London in 1962 on

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13. *See* FRANCESCO GALGANO, LEX MERCATORIA (4th ed. 2001).

14. *See* 1 F.A. HAYEK, LAW, LEGISLATION AND LIBERTY: RULES AND ORDER 8–34 (1973).

15. GERARD MALYNES, CONSUETUDO VEL LEX MERCATORIA: OR THE ANCIENT LAW-MERCHANT vi (photo. reprint 1997) (1622).

16. Edward Christian, Note, 1 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND *75 (Edward Christian ed., 14th ed. 1803) (1765), *quoted in* READINGS ON THE HISTORY AND SYSTEM OF THE COMMON LAW 223 (Roscoe Pound & Theodore F.T. Plucknett eds., 3d ed. 1927).

17. Before the 1960s, the lex mercatoria had been invoked by great comparative law scholars, such as Saleilles and Lambert, during the First International Congress of Comparative Law held in Paris in 1900. *See* H.C. GUTTERIDGE, COMPARATIVE LAW 5–6, 18–19 (2d ed. 1949). Subsequently, international lawyers such as Fragistas and Goldstajn authored some articles on the emerging role of transnational law, both for arbitration procedure and for East-West trade during

the sources of contemporary law of international trade, Clive Schmitthoff argued that the practices of international trade might form a new lex mercatoria, observing:

> The evolution of an autonomous law of international trade, founded on universally accepted standards of business conduct, would be one of the most important developments of legal science in our time. It would constitute a common platform for commercial lawyers from all countries, those of planned and free market economy, those from civil law and common law, and those of fully developed and developing economy, which would enable them to co-operate in the perfection of the legal mechanism of international trade.[18]

A seminal 1964 article by Berthold Goldman defined the scope of operation of the new law merchant more clearly.[19] As was the case during medieval times, this new law merchant was driven by the need for a uniform set of principles to govern international commercial transactions, as well as the desire for expeditious resolution of disputes. In its modern form, the lex mercatoria emerges from the terms of standard international commercial contracts, professional codes of conduct, trade usages, general principles of law, and arbitral decisions.[20] As proof of the exis-

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the Cold War era. *See* Klaus Peter Berger, *The New Law Merchant and the Global Market Place: A 21st Century View of Transnational Commercial Law*, 2000 INT'L ARB. L. REV. 91, 93, *reprinted in* THE PRACTICE OF TRANSNATIONAL LAW 1, 3 (Klaus Peter Berger ed., 2001).

18. Clive M. Schmitthoff, *The Law of International Trade, Its Growth, Formulation and Operation*, *in* THE SOURCES OF THE LAW OF INTERNATIONAL TRADE 3, 5 (Clive M. Schmitthoff ed., 1964).

19. Berthold Goldman, *Frontiers du droit et "lex mercatoria," in* ARCHIVES DE PHILOSOPHIE DU DROIT 177 (1964) [hereinafter Goldman, *Frontiers du droit*]. For further development of Goldman's approach, see Berthold Goldman, *La lex mercatoria dans les contrats et l'arbitrage internationaux: réalité et perspectives*, 106 JOURNAL DU DROIT INTERNATIONAL 475 (1979) (Fr.); Berthold Goldman, *La volonté des parties et le rôle de l'arbitre dans l'arbitrage international*, 1981 REVUE DE L'ARBITRAGE 469 (Fr.); Berthold Goldman, *The Applicable Law: General Principles of Law—the* Lex Mercatoria, *in* CONTEMPORARY PROBLEMS IN INTERNATIONAL ARBITRATION 113 (Julian D.M. Lew ed., 1986) [hereinafter Goldman, *Applicable Law*]; Berthold Goldman, *Nouvelles réflexions sur la* lex mercatoria, *in* ETUDES DE DROIT INTERNATIONAL EN L'HONNEUR DE PIERRE LALIVE 241 (Christian Dominicé et al. eds., 1993). Goldman's views were notably extended by Philippe Kahn and Philippe Fouchard. *See* PHILIPPE KAHN, LA VENTE COMMERCIALE INTERNATIONALE 365–67 (1964); PHILIPPE FOUCHARD, L'ARBITRAGE COMMERCIAL INTERNATIONAL 465–546 (1965).

20. *See* sources cited *supra* note 19; KLAUS PETER BERGER, THE CREEPING CODIFICATION OF THE LEX MERCATORIA (1999); FELIX DASSER, INTERNATIONALE SCHIEDSGERICHTE UND LEX MERCATORIA (1989); JULIAN D.M. LEW, APPLICABLE LAW IN INTERNATIONAL COMMERCIAL ARBITRATION (1978); FILIP DE LY, INTERNATIONAL BUSINESS LAW AND LEX MERCATORIA

tence of a new lex mercatoria, advocates point to references to the lex mercatoria in choice of law provisions in international commercial contracts as well as the willingness of arbitrators to refer to the lex mercatoria when making arbitral awards.

Recent studies have shown that such private lawmaking is condoned by the United States and many industrialized European countries through organizations such as the American Arbitration Association and in the securities sector through the New York Stock Exchange, the American Stock Exchange, the National Association of Securities Dealers,[21] and banking clearing-houses.[22] The same holds true for international commodities merchants such as diamond dealers,[23] grain merchants,[24] cotton merchants,[25] and, of course, Internet services and domain providers.[26] Law and economics research has confirmed that market-based sanctions may assure the enforcement of lex mercatoria outside of or in combination with state legal enforcement mechanisms.[27]

(1992); FABRIZIO MARRELLA, LA NUOVA LEX MERCATORIA: PRINCIPI UNIDROIT ED USI DEI CONTRATTI DEL COMMERCIO INTERNAZIONALE (2003).

21. *See* George J. Benston, *Regulation of Stock Trading: Private Exchanges vs. Government Agencies*, 83 VA. L. REV. 1501 (1997); Chris A. Carr & Michael R. Jencks, *The Privatization of Business and Commercial Dispute Resolution: A Misguided Policy Decision*, 88 KY. L.J. 183 (2000); Jonathan R. Macey & Maureen O'Hara, *Regulating Exchanges and Alternative Trading Systems: A Law and Economics Perspective*, 28 J. LEGAL STUD. 17 (1999); David V. Snyder, *Private Lawmaking*, 64 OHIO ST. L.J. 371, 384–88 (2003).

22. *See* Snyder, *supra* note 21, at 395–99.

23. *See* Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115 (1992).

24. *See* Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996).

25. *See* Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724 (2001).

26. *See* Clayton P. Gillette, *Pre-Approved Contracts for Internet Commerce*, 42 HOUS. L. REV. 975 (2005); Clayton P. Gillette, *Reputation and Intermediaries in Electronic Commerce*, 62 LA. L. REV. 1165 (2002); Clayton P. Gillette, *Interpretation and Standardization in Electronic Sales Contracts*, 53 SMU L. REV. 1431 (2000); Clayton P. Gillette & Paul B. Stephan III, *Constitutional Limitations on Privatization*, 46 AM. J. COMP. L. 481 (1998 Supp.); Bruce H. Kobayashi & Larry E. Ribstein, *Uniformity, Choice of Law and Software Sales*, 8 GEO. MASON L. REV. 261 (1999); A. Brooke Overby, *Will Cyberlaw Be Uniform? An Introduction to the UNCITRAL Model Law on Electronic Commerce*, 7 TUL. J. INT'L & COMP. L. 219 (1999); Margaret J. Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1998); Larry E. Ribstein & Bruce H. Kobayashi, *State Regulation of Electronic Commerce*, 51 EMORY L.J. 1 (2002).

27. *See* Nerina Boschiero, *La* lex mercatoria *nell'era della globalizzazione: considerazioni di diritto internazionale pubblico e privato*, 2005 SOCIOLOGIA DEL DIRITTO 83 (Italy); Robert D. Cooter, *Decentralized Law for a Complex Economy*, 23 SW. U. L. REV. 443 (1994); Robert D. Cooter, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law*, 14

The new lex mercatoria's most avid proponents describe it as a third system of law, independent of both national and public international law. Its essential characteristics are its spontaneity (in that it is created by decentralized private ordering, rather than by any particular nation, organization, or person), its universality, and its autonomy from legal systems (in that it does not depend on national or public international law for its existence or development). Others take a more limited view, regarding the lex mercatoria as providing a streamlined process for resolving disputes[28] or as a system for filling the gaps left by existing law.[29] Since neither of these more limited visions of the lex mercatoria can serve as the basis for the type of bottom-up ordering envisioned for the Internet, we will focus on the broader vision. Other scholars have adopted an even more skeptical stance towards the lex mercatoria, challenging both its Roman and medieval roots[30] as well as the existence of its modern revival.[31]

INT'L REV. L. & ECON. 215 (1994); Clayton P. Gillette, *Rules, Standards, and Precautions in Payment Systems*, 82 VA. L. REV. 181; (1996); David M. Lawrence, *Private Exercise of Governmental Power*, 61 IND. L.J. 647 (1986); Jonathan R. Macey, *Public and Private Ordering and the Production of Legitimate and Illegitimate Legal Rules*, 82 CORNELL L. REV. 1123 (1997); Fabrizio Marrella, *La nuova* lex mercatoria *tra controversie dogmatiche e mercato delle regole. Note di analisi economica del diritto dei contratti internazionali*, 2005 SOCIOLOGIA DEL DIRITTO 249 (Italy); Steven L. Schwarcz, *Private Ordering*, 97 NW. U. L. REV. 319 (2002); Alan Schwartz & Robert E. Scott, *The Political Economy of Private Legislatures*, 143 U. PA. L. REV. 595 (1995); Paul B. Stephan, *Accountability and International Lawmaking: Rules, Rents and Legitimacy*, 17 NW. J. INT'L L. & BUS. 681 (1996); James J. White, *Ex Proprio Vigore*, 89 MICH. L. REV. 2096 (1991).

28. *See* William Jones, The Settlement of Mercantile Disputes by Merchants: An Approach to the History of Commercial Law, Address at the University of Chicago Law School Symposium: The Empirical and Theoretical Underpinnings of the Law Merchant (Oct. 16–17, 2003), *cited in* Mark D. Rosen, *Do Codification and Private International Law Leave Room for a New Law Merchant?*, 5 CHI. J. INT'L L. 83, 85 n.9 (2004).

29. *See* BERGER, *supra* note 20, at 40.

30. *See, e.g.*, J.H. Baker, *The Law Merchant and the Common Law Before 1700*, 38 CAMBRIDGE L.J. 295, 299–308 (1979); Charles Donahue, Jr., *Medieval and Early Modern Lex Mercatoria: An Attempt at the Probatio Diabolica*, 5 CHI. J. INT'L L. 21 (2004); Emily Kadens, *Order Within Law, Variety Within Custom: The Character of the Medieval Merchant Law*, 5 CHI. J. INT'L L. 39 (2004); Stephen E. Sachs, *From St. Ives to Cyberspace: The Modern Distortion of the Medieval "Law Merchant"*, 21 AM. U. INT'L L. REV. 685 (2006); Oliver Volckart & Antje Mangels, *Are the Roots of the Modern Lex Mercatoria Really Medieval?*, 65 S. ECON. J. 427 (1999); Albrecht Cordes, *The Search for a Medieval* Lex Mercatoria, 2003 OXFORD U. COMP. L.F. 5, http://ouclf.iuscomp.org/articles/cordes.shtml.

31. *See, e.g.*, Georges R. Delaume, *Comparative Analysis as a Basis of Law in State Contracts: The Myth of the Lex Mercatoria*, 63 TUL. L. REV. 575 (1989); Keith Highet, *The Enigma of the Lex Mercatoria*, 63 TUL. L. REV. 613 (1989); Christoph W.O. Stoecker, *The Enigma of the Lex Mercatoria: To What Extent Does it Exist?*, J. INT'L ARB., Mar. 1990, at 101, 109–10. As one

Today, choice of law clauses permit harmonization of international commercial law by specifying that the substantive legal rules used to resolve the dispute may encompass, via the lex mercatoria, general principles of law and the customs and practices of international trade rather than the substantive contract law of any particular state.[32] Although national courts once subjected foreign law to fairly intensive review to ensure its consistency with the public policy embedded in local law, over time most nations' courts have become increasingly willing to honor the contracting parties requests to apply foreign law or even a law of their own devising.[33] Honoring the contracting parties' choice of law provisions obviates the need to resolve the vexing choice of law issues that often plague disputes over international transactions. In so doing, it provides the uniformity upon which international trade depends.

In addition, most international commercial contracts include a clause

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commentator notes, "The modern *lex mercatoria* is unlike any other field of law. People never tire of asking whether it exists." Celia Wasserstein Fassberg, *Lex Mercatoria—Hoist with Its Own Petard?*, 5 CHI. J. INT'L L. 67, 67 (2004).

32. The most recent evaluation of U.S. law concludes that U.S. law will permit parties to agree that arbitrations will be governed by non-state norms, such as the lex mercatoria. Symeon C. Symeonides, *Contracts Subject to Non-State Norms*, 54 AM. J. COMP. L. 209, 210–15 (2006) (U.S. National Report to the 17th International Congress of Comparative Law), *available at* http://www2.law.uu.nl/priv/AIDC/PDF%20files/IIB1/IIB1%20-%20USA.pdf. International arbitration regulation rules provide a legal basis for a choice of the lex mercatoria. For example, the arbitration rules of the London Court of International Arbitration permit the parties to agree that the arbitration be governed by law other than that of the seat of arbitration. *See* LONDON COURT OF INTERNATIONAL ARBITRATION RULES art. 16.3 (1998), *available at* http://www.lcia.org/ARB_folder/ARB_DOWNLOADS/ENGLISH/rules.pdf. The arbitration rules of the International Chamber of Commerce, the International Institute for Confliction Prevention and Resolution Rules for Non-Administered Arbitration (formerly the Center for Public Resources Institute for Dispute Resolution), the Stockholm Chamber of Commerce, and the World Intellectual Property Organization provide that the tribunal shall apply the rules of law agreed upon by the parties or, in the absence of such an agreement, the law that the tribunal "determines to be appropriate." *See* INT'L CHAMBER OF COMMERCE, RULES OF ARBITRATION art. 17.1 (1998), *available at* http://www.iccwbo.org/court/english/arbitration/rules.asp; INT'L INST. FOR CONFLICT PREVENTION & RESOLUTION, RULES FOR NON-ADMINISTERED ARBITRATION R. 10.1, *available at* http://www.cpradr.org/pdfs/arb-rules2005.pdf; ARBITRATION RULES OF THE ARBITRATION INSTITUTE OF THE STOCKHOLM CHAMBER OF COMMERCE art. 22.1 (2007), *available at* http://www.sccinstitute.com/_upload/shared_files/regler/new_scc_rules_070101.pdf; WORLD INTELLECTUAL PROPERTY ORG. ARB. & MEDIATION CTR., WIPO ARBITRATION RULES art. 59(a) (1994), *available at* http://www.wipo.int/amc/en/arbitration/rules/index.html.

33. *See* Ralf Michaels, *The Re-State-Ment of Non-State Law: The State, Choice of Law, and the Challenge from Global Legal Pluralism*, 51 WAYNE L. REV. 1209, 1227–37 (2005) (arguing that under modern conflict of law principles, courts refuse to apply non-state law like the lex mercatoria as law, but will enforce arbitrations based on non-state law and will use a variety of other devices to acknowledge non-state normative orders); Symeonides, *supra* note 32, at 212.

specifying that any disputes arising from the contract will be resolved through commercial arbitration. Shifting disputes to an arbitral forum has provided for expedited resolution and inoculated the parties from anti-foreign biases.[34] Although reliance on arbitration may make the new lex mercatoria somewhat dependent on national law, any such dependence is relatively thin. While courts were once quite protective of their own jurisdiction and somewhat reluctant to enforce arbitral judgments based on laws that conflicted with the public policy of national law, most systems are now willing to compel arbitration in accordance with arbitration clauses and construe the public policy exception to the enforcement of arbitral judgments based on foreign law rather narrowly.[35] As a result, arbitration clauses have proven quite effective in freeing disputes from the application of norms by national courts, allowing commercial expertise to bear on these norms instead.

The new lex mercatoria has been fostered by recent attempts to distill a set of model rules to govern international commercial transactions, including the Principles of International Commercial Contracts produced by the International Institute for the Unification of Private Law (UNIDROIT),[36] and on a different scale the Principles of European Contract Law,[37] as well as by scholarly attempts to synthesize the lex mercatoria into a set of core legal principles.[38] Arbitrators have evinced an in-

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34. Among a vast literature see Bruno Oppetit, *Philosophie de l'arbitrage commercial international*, 120 JOURNAL DU DROIT INTERNATIONAL 811 (1993) (Fr.); Andreas Lowenfeld, *Lex Mercatoria: An Arbitrator's View*, 6 ARB. INT'L 133 (1990), *reprinted in* LEX MERCATORIA AND ARBITRATION 37 (Thomas E. Carbonneau ed., rev. ed. 1998); ANDREAS LOWENFELD, INTERNATIONAL LITIGATION AND ARBITRATION (3d ed. 2006).

35. *See* Stephen J. Ware, *Default Rules from Mandatory Rules: Privatizing Law Through Arbitration*, 83 MINN. L. REV. 703, 725 (1999) (noting that "courts rarely vacate arbitration awards on public policy grounds") (citing 4 IAN R. MACNEIL ET AL., FEDERAL ARBITRATION LAW § 40.8, at 40:96–:104 (1994)).

36. INT'L INST. FOR THE UNIFICATION OF PRIVATE LAW, UNIDROIT PRINCIPLES OF INTERNATIONAL COMMERCIAL CONTRACTS (2004), *available at* http://www.unidroit.org/english/principles/contracts/main.htm.

37. 1 & 2 COMM'N ON EUR. CONTRACT LAW, PRINCIPLES OF EUROPEAN CONTRACT LAW (Ole Lando & Hugh Beale eds., 2000), *available at* http://www.jus.uio.no/lm/eu.contract.principles.1998/doc.html; 3 COMM'N ON EUR. CONTRACT LAW, PRINCIPLES OF EUROPEAN CONTRACT LAW (Ole Lando et al. eds., 2003), *available at* http://www.jus.uio.no/lm/eu.contract.principles.parts.1.to.3.2002.

38. *See* Tom Carbonneau, *A Definition of and Perspective Upon the Lex Mercatoria Debate*, *in* LEX MERCATORIA AND ARBITRATION, *supra* note 34, at 11, 16–20; Goldman, *Applicable Law*, *supra* note 19, at 123–25; Rt. Hon. Lord Justice Mustill, *The New* Lex Mercatoria*: The First Twenty-five Years*, *in* LIBER AMICORUM FOR THE RT. HON. LORD WILBERFORCE 149, 174–77 (Maarten Bos & Ian Brownlie eds., 1987); Note, *General Principles of Law in International*

creasing willingness to apply the lex mercatoria and UNIDROIT when the choice of law provision of an international contract specifically invokes them, when determining the relevant principle of national law is difficult or impossible to determine, and when filing gaps in international conventions such as the United Nations Convention on Contracts for the International Sale of Goods (CISG).[39]

The lex mercatoria and the UNIDROIT Principles have begun to influence European policymakers outside the context of arbitration and international contracts as well. Choice of law issues in Europe are currently governed by the Convention on the Applicable Law to Contractual Obligations (commonly known as the 1980 Rome Convention).[40] Article 4 of the Rome Convention provides that in the absence of a choice of law clause, disputes will be "governed by the law of the country with which [the contract] is most closely connected," which is presumed to be the country of the party who is to effect the performance unless "it appears from the circumstances as a whole that the contract is more closely connected with another country."[41] Presently, the European Community is considering replacing the 1980 Rome Convention with a new regulation. Article 3 of the proposed EC regulation provides that "a contract shall be governed by the law chosen by the parties"[42] and specifically recognizes the possible application of nonnational law by providing:

> The parties may also choose as the applicable law the principles and rules of the substantive law of contract recognised internationally or in the Community. However, questions relating to matters governed by such principles or rules which are not expressly settled by them shall be governed by the general principles underlying them or, failing such principles, in accordance

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Commercial Arbitration, 101 HARV. L. REV. 1816, 1826–33 (1988); Transnational Law Digest & Bibliography, http://tldb.uni-koeln.de/ (last visted Aug. 1, 2007).

39. *See generally* Fabrizio Marrella, *Choice of Law in Third Millennium Arbitrations: The Relevance of the UNIDROIT Principles of International Commercial Contracts*, 36 VAND. J. TRANSNAT'L L. 1137, 1158–77 (2003). Further references are available in the UNILEX database. UNILEX on CISG & UNIDROIT Principles, http://www.unilex.info/ (last visited Aug. 1, 2007).

40. Rome Convention on the Law Applicable to Contractual Obligations, June 19, 1980, 1980 O.J. (L 266) 1, *available at* http://www.jus.uio.no/lm/ec.applicable.law.contracts.1980/doc.html.

41. *Id.* art. 4, paras. 1, 5.

42. *Commission Proposal for a Regulation of the European Parliament and the Council on the Law Applicable to Contractual Obligations (Rome I)*, at 14, COM (2005) 650 final (Dec. 15, 2005), *available at* http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0650en01.pdf.

> with the law applicable in the absence of a choice under this Regulation.[43]

The commentary on the proposed regulation makes clear that this language "authorises the parties to choose as the applicable law a non-State body of law," including "the UNIDROIT principles, the *Principles of European Contract Law* or a possible future optional Community instrument."[44] Whether it would authorize a choice of law provision invoking the lex mercatoria directly would depend on whether the lex mercatoria constituted a body of contract law "recognised internationally or in the Community."[45] Furthermore, the commentary explicitly suggests that the provision would exclude a choice of law provision based on the lex mercatoria on the grounds that it is insufficiently precise. The interpretation of the provision offered by the commentary is somewhat self-contradictory, since it may be argued that even the UNIDROIT Principles are not, technically speaking, "recognised internationally." Some scholars have pointed out that the UNIDROIT Principles are an academic exercise.[46] Thus, in contrast to the work of the United Nations International Law Commission,[47] the UNIDROIT Principles are the result of the efforts of eminent lawyers and law professors. In this sense, the UNIDROIT Principles are similar to a Restatement produced by the American Law Institute, but on a global scale.[48] Hence, the UNIDROIT

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43. *Id.*

44. *Id.* at 5.

45. *Id.* at 14.

46. *See* Andrea Giardina, *Les principes UNIDROIT sur les contrats internationaux*, 3 JOURNAL DU DROIT INTERNATIONAL 547 (1995) (Fr.); Catherine Kessedjian, *Un exercice de rénovation des sources du droit des contrats du commerce international: Les Principes proposés par l'UNIDROIT*, 4 REVUE CRITIQUE DE DROIT INTERNATIONAL PRIVE 641 (1995) (Fr.).

47. According to the U.N. General Assembly statute that created the International Law Commission, the Commission's object is the "progressive development of international law." Statute of the International Law Commission art. 1(1), G.A. Res. 174 (II) (Nov. 21, 1947), *available at* http://untreaty.un.org/ilc/texts/instruments/english/statute/statute_e.pdf. The statute further provides:

> [T]he expression "progressive development of international law" is used for convenience as meaning the preparation of draft conventions on subjects which have not yet been regulated by international law or in regard to which the law has not yet been sufficiently developed in the practice of States. Similarly, the expression "codification of international law" is used for convenience as meaning the more precise formulation and systematization of rules of international law in fields where there already has been extensive State practice, precedent and doctrine.

Id. art. 15.

48. *See* MICHAEL J. BONELL, AN INTERNATIONAL RESTATEMENT OF CONTRACT LAW (2d ed. 2005).

Principles derive their legitimacy from the bottom up rather than from the top down.

III. CAN OPEN SOURCE SOFTWARE SERVE AS A NEW LEX MERCATORIA FOR THE INTERNET?

The debates around the lex mercatoria provide a framework for evaluating whether open source software can serve as the foundation for the type of bottom-up ordering envisioned by many Internet scholars. We focus on three aspects often said to be essential to the lex mercatoria: spontaneity, universality, and autonomy from national law.

A. Spontaneity

The lex mercatoria is often described as being "spontaneous," in that it emerges from the practices of merchants without any exercise of governmental power, intergovernmental lawmaking process, or ratification.[49] Indeed, spontaneity is often described as one of the lex mercatoria's defining characteristics.[50] Although some scholars argue that spontaneity also requires that the lex mercatoria not be fashioned as an instrument of harmonization,[51] others claim that attempts to harmonize international commercial law may still be part of the lex mercatoria so long as they do not rely on an exercise of sovereign power by the constituent states.[52]

Serious questions exist whether open source software satisfies the lex mercatoria's definition of spontaneity. Although the institution of open

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49. In the words of Lord Justice Mustill, "The *lex mercatoria* simply exists. It springs up spontaneously, in the soil of international trade. It is a growth, not a creation." Mustill, *supra* note 38, at 153. For other examples of defining the lex mercatoria in terms of spontaneity, see Bernard Audit, *The Vienna Sales Convention and the Lex Mercatoria*, *in* LEX MERCATORIA AND ARBITRATION, *supra* note 34, at 173, 173; and Goldman, *Applicable Law*, *supra* note 19, at 114.

50. *See* R.J. Dupuy, Legal Opinion to Aminoil para. 26, Kuwait v. Aminoil, 21 I.L.M. 976 (1982) (calling the lex mercatoria "a phenomenon whose principal characteristic is that it is spontaneous"), *quoted in* Abul F.M. Maniruzzaman, *The Lex Mercatoria and International Contracts: A Challenge for International Commercial Arbitration?*, 14 AM. U. INT'L L. REV. 657, 666 (1999); Roy Goode, *Rule, Practice, and Pragmatism in Transnational Commercial Law*, 54 INT'L & COMP. L.Q. 539, 548 (2005) (noting that "the process of spontaneous lawmaking…is said to be the hallmark of the lex mercatoria"); Maniruzzaman, *supra*, at 666–67 (calling spontaneity "the principal basis of selection of rules for the lex mercatoria").

51. *See* Fassberg, *supra* note 31, at 80–81; Mustill, *supra* note 38, at 152–53; Rosen, *supra* note 28, at 89.

52. *See* Berthold Goldman, *Lex Mercatoria*, FORUM INTERNATIONALE, Nov. 1983, at 1, 7.

source software is the result of individual licensing decisions, the content of those licenses is more the reflection of the will of strong norm entrepreneurs who wish to shape the values of the online community rather than the emergence of customs established through decentralized decisionmaking. Of particular significance are the efforts of Richard Stallman, who, as noted earlier, led the development of GNU/Linux operating system into the first significant open source project and wrote both the initial and subsequent versions of the GPL.[53] Stallman has made clear that he regards the open source movement as a "stark moral choice" and has made it a personal goal to inculcate new users with the open source philosophy.[54] Another organization known as the Open Source Initiative, which is the current certifying body for open source licenses, was also created not to reflect industry customs and norms, but rather to transform them self-consciously through a media campaign designed to work from the top down rather than the bottom up.[55]

The centralized nature of open source norm creation makes it hard to characterize the open source movement as the result of spontaneous, bottom-up, decentralized decisionmaking. Instead, open source principles are more properly regarded as a reflection of the views espoused by leading open source advocates.

B. Universality

As Harold Berman notes, "The universal character of the law merchant…has been stressed by all who have written about it."[56] The commonness across countries represent a major part of the lex mercatoria's utility. On a more fundamental level, however, many advocates of the lex mercatoria believe that this universality is based on the existence of a common core of legal rules that are so "[u]niversally acknowledged" as to constitute "natural-law-type principles."[57]

Others have challenged the universality of the lex mercatoria. Some point to the enduring disputes over the content of the lex mercatoria, ar-

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53. *See supra* note 11 and accompanying text.

54. Stallman, *supra* note 11, at 55–63, 67–70.

55. *See* Eric S. Raymond, *The Revenge of the Hackers*, *in* OPEN SOURCES, *supra* note 11, at 207, 211–16.

56. BERMAN, *supra* note 12, at 342. For other statements defining the lex mercatoria in terms of "universality," see Goldman, *Frontiers du droit*, *supra* note 19, at 183; Mustill, *supra* note 38, at 157; and GALGANO, *supra* note 13.

57. Carbonneau, *supra* note 38, at 16.

guing that the resulting principles are so vague and general as to provide little real guidance or constraint.[58] Others argue that the lex mercatoria disproportionately reflects the views of industrialized western nations.[59]

Still others take a more contextual view of universality, drawing a distinction between "macro" lex mercatoria, which are the legal principles common to all or most of the nations engaged in international trade, and "micro" lex mercatoria, which means the legal principles generated by a particular contract.[60] From this perspective, the lex mercatoria need not be truly universal so long as it is uniform with respect to the legal systems connected with the dispute.[61] Others regard the lex mercatoria not as a single, unified body of law, but rather sets of laws that vary from industry to industry in the form of a separate "lex petrolea," "lex constructionis," "lex electronica," and "lex maritima."[62] Moreover, even if the substance is uniform, the application to particular facts requires interpretation. In the process, interpreters necessarily bring in their own culture by the way they frame the issues and how they interpret.[63]

Open source has not achieved the type of universality or uniformity of principles envisioned by proponents of the lex mercatoria. The lack of unifying principles is exemplified by the proliferation of types of open source licenses. As of this writing, the Open Source Initiative has ap-

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58. *See* Cordes, *supra* note 30; Paul Lagarde, *Approche critique de la lex mercatoria*, *in* LE DROIT DES RELATIONS ÉCONOMIQUES INTERNATIONALES: ÉTUDES OFFERTES À BERTHOLD GOLDMAN 125 (1982); Peter M. Flanagan, *Demythologising the Law Merchant: The Impropriety of the Lex Mercatoria as a Choice of Law*, 15 INT'L COMPANY & COM. L. REV. 297, 300–01 (2004).

59. *See* Maniruzzaman, *supra* note 50, at 691, 718; Sampson L. Sempasa, *Obstacles To International Commercial Arbitration in African Countries*, 41 INT'L & COMP. L.Q. 387, 410 (1992); M. Sornarajah, *The UNCITRAL Model Law: A Third World Viewpoint*, J. INT'L ARB., Dec. 1989, 7, 17, 20. *See generally* DE LY, *supra* note 20, at 208–48.

60. *See* Maniruzzaman, *supra* note 50, at 691 & n.151.

61. *See* Ole Lando, *The Lex Mercatoria in International Commercial Arbitration*, 34 INT'L & COMP. L.Q. 747, 750 (1985).

62. *See* Doak R. Bishop, *International Arbitration of Petroleum Disputes: The Development of a Lex Petrolea*, 23 Y.B. COM. ARB. 1131 (1998); Michael Douglas, *The Lex Mercatoria and the Culture of Transnational Industry*, 13 U. MIAMI INT'L & COMP. L. REV. 367, 394–95 (2006); Vincent Gautrais et al., *Droit du Commerce Electronique et Norme Applicable: L'Emergence de la Lex Electronica*, 5 REVUE DE DROIT DES AFFAIRS INTERNATIONALES 547 (1997) (Fr.); Maniruzzaman, *supra* note 50, at 667–68; Fabrizio Marrella, *Unity and Diversity in International Arbitration: The Case of Maritime Arbitration*, 20 AM. U. INT'L L. REV. 1055 (2005); Charles Molineaux, *Moving Toward a Construction* Lex Mercatoria*:* A Lex Constructionis, J. INT'L ARB., Mar. 1997, at 55, 59–61; William Tetley, *The General Maritime Law—The Lex Maritima (with a Brief Reference to the Ius Commune in Arbitration Law and the Conflict of Laws)*, 20 SYRACUSE J. INT'L L. & COM. 105 (1994).

63. *See* Douglas, *supra* note 62, at 383.

proved fifty-eight different open source licenses.[64] A brief discussion of two of the most common open source licenses illustrates the point. The licensing restrictions contained in the GPL apply not only to the original code covered by the GPL, but also to any modifications that cannot reasonably be considered independent and separate works. These provisions cause these licenses to sometimes be described as "reciprocal," in that any developer who wishes to take advantage of open access to an existing piece of GPL code must contribute any improvements they make back to the open source community.[65] They are also described as "viral," because any proprietary code that becomes integrated with code licensed under the GPL becomes subject to the open source mandate.[66] "Academic" licenses, like the Berkeley Software Distribution ("BSD") license, are quite different in that they do not require that modifications be made freely available to others. Instead, the BSD only requires that any modification provide clear notice of the changes and give appropriate credit to the creators of the original code.[67] The effect is to allow open source software distributed under a BSD license to be freely combined with proprietary software without any concern.

The differences between reciprocal and academic licenses reflect the plurality of norms underlying the open source movement. Reciprocal licenses reflect a distaste for the commercialization of software and a reluctance to allow those driven by profit to use open source software to their own commercial advantage. Academic licenses do not share this hostility and instead reflect a belief that work prepared solely for academic purposes should be freely available to everyone with no strings attached. The underlying heterogeneity of norms and practices thus undercuts any assertions that open source software provides the type of universality associated with the lex mercatoria.

C. Autonomy

Finally, the lex mercatoria is typically described as being "autonomous," in that its development is said to be independent from both na-

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64. *See* Open Source Initiative, The Approved Licenses, http://www.opensource.org/licenses (last visited Aug. 1, 2007).

65. *See* Mann, *supra* note 9, at 16–17.

66. *See* Greg R. Vetter, *The Collaborative Integrity of Open-Source Software*, 2004 UTAH L. REV. 563, 633–34.

67. *See* Mann, *supra* note 9, at 17–18.

tional and international law.[68] One should be careful not to make too much of this claim. Complete separation of legal systems is an abstract dogma which does not correspond to reality. In this respect, even (public) international law is not completely separate from national legal systems. This does not, of course, imply that international law is not "law" in a technical sense.[69] Rather the claim of autonomy means that private business actors can produce law (even if it is not "national law") without a previous authorization by nation states. In this sense, lex mercatoria may exist and be applied without a "rule of recognition" emanating by nation states.[70]

From this perspective, it is no surprise that lex mercatoria may depend upon national law to recognize arbitral jurisdiction and to enforce arbitral judgments.[71] The dependence of the lex mercatoria on national law is relatively thin. All that is required of national law is that it enforce arbitration clauses by compelling arbitration and recognize and enforce arbitral decisions once they have been handed down. Although the courts of many countries were once quite aggressive in declining to condone arbitration under legal principles that conflicted with the public policy of national law, over time they have exhibited a greater willingness to apply foreign law and the lex mercatoria.[72]

Open source software is much more dependent on national law than are transactions governed by the lex mercatoria. Open source licenses typically make no provision for arbitration of disputes. As a result, enforcement of the copyright license and substantive copyright law is left to national courts and the choice of law rules embodied in national law. Furthermore, the substance of the copyright and patent law of individual

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68. *See* Goldman, *supra* note 52, at 22; Lando, *supra* note 61, at 752; Mustill, *supra* note 38, at 151 (describing the lex mercatoria as "anational").

69. *See* Alain Pellet, *La* lex mercatoria*, "tiers ordre juridique"? Remarques ingénues d'un internationaliste de droit public*, *in* SOUVERAINETE ETATIQUE ET MARCHES INTERNATIONAUX A LA FIN DU 20EME SIECLE : A PROPOS DE 30 ANS DE RECHERCHE DU CREDIMI : MELANGES EN L'HONNEUR DE PHILIPPE KAHN 53 (2000).

70. The argument is adequately developed by Gunther Teubner, *Global Bukowina*, *in* GLOBAL LAW WITHOUT A STATE 3 (Gunther Teubner ed., 1997). The classic work on the rule of recognition is, of course, H.L.A. HART, THE CONCEPT OF LAW 97–150 (1961).

71. *See* GEORGES R. DELAUME, LAW AND PRACTICE OF TRANSNATIONAL CONTRACTS 99 (1988) (recognizing that "the 'delocalization' of transnational contracts in never complete"); William W. Park, *Control Mechanisms in the Development of a Modern Lex Mercatoria*, *in* LEX MERCATORIA AND ARBITRATION, *supra* note 34, at 143, 152; Highet, *supra* note 31, at 614–15; Hans Smit, *Proper Choice of Law and the Lex Mercatoria Arbitralis*, *in* LEX MERCATORIA AND ARBITRATION, *supra* note 34, at 93, 108.

72. *See supra* notes 33, 35 and accompanying text.

nations exert considerable influence over open source software as well.

1. Copyright

Authors of open source software could have ensured open access to their work simply by renouncing copyright protection and dedicating their code to the public domain. Open source advocates chose not to follow this approach primarily out of concern that follow-on developers who made derivative works based on open source code would frustrate the purposes of the open source movement by copyrighting their improvements. In order to prevent this, the basic approach of the GPL is to copyright software and then license it to everyone under the condition that every licensee agrees to distribute freely any improvements or modifications they may make.

The result is that the scope of rights under open source licenses depends on copyright law. The primary international copyright treaties, such as the Berne Convention and the General Agreement on Tariffs and Trade (GATT), as well as efforts at regional copyright harmonization through forums such as the North American Free Trade Agreement (NAFTA), the European Union, and the Andean Pact have all declined to establish an international copyright law. They instead established minimum levels of protection that leave countries free to add additional protection as they see fit. The resulting variations in the scope of copyright protection leave open source software dependent on national law.

A few examples will illustrate the point. Consider, first, the difficult issues surrounding moral rights. The copyright law of many European nations gives strong protection to moral rights, including the rights of disclosure, withdrawal, attribution, and integrity. These rights are often nonwaivable and thus cannot be dissipated via a license. As a result, programmers who modify code may retain rights in the code they produce regardless of the specific terms of the open source license.[73] U.S. law, in contrast, offers minimal protection of moral rights and restricts those to the visual arts.[74] These differences mean that the success of the open source's movement strategy of copyrighting software and then including license terms requiring that all modifications be shared necessarily depends on the details of national law.

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73. *See, e.g.*, Neil Netanel, *Copyright Alienability Restrictions and the Enhancement of Author Autonomy: A Normative Evaluation*, 24 RUTGERS L.J. 347 (1993).

74. *See* Visual Artists Rights Act, 17 U.S.C. § 106A (2000).

Consider also the clause of the GPL license requiring that all derivative works be distributed on the same terms as the GPL.[75] There is reason to question the validity of this provision under U.S. law, which has traditionally been somewhat hostile towards attempts to use market power provided by intellectual property to control the disposition of follow-on innovation.[76] In particular, the GPL provisions on licensing follow-on innovations resemble provisions in patent licenses commonly known as "grantbacks." More modest grantback provisions simply require patent licensees to give the licensor a nonexclusive license to any improvements based on the licensed patent. More restrictive grantback provisions require the licensee to assign any patents to follow-on improvements back to the licensor outright. The Supreme Court recognized that although licenses requiring licensees to assign patents on any improvement back to the patent holder are not illegal per se, circumstances exist under which they can violate the antitrust laws.[77] Some lower federal courts have carried the Supreme Court's reasoning to its logical conclusion and held that certain grantback provisions constituted antitrust violations,[78] and during the 1970s the Justice Department listed grantback provisions among the nine licensing practices that it considered to be illegal per se.[79]

In addition, the Supreme Court has long employed a doctrine known as patent misuse to invalidate patent holders' attempts to extend their patents beyond their proper scope.[80] Patent misuse encompasses, but is

75. *See supra* note 66 and accompanying text.

76. Some early judicial decisions suggested that any license term that imposed restrictions that exceeded those imposed by copyright law were preempted. *See, e.g.*, Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 270 (5th Cir. 1988). The trend of more recent decisions is to hold that copyright law does not preempt such licensing agreements. *See, e.g.*, Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1323–26 (Fed. Cir. 2003) (applying First Circuit law); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1453–55 (7th Cir. 1996); Nat'l Car Rental Sys., Inc. v. Computer Assocs. Int'l, Inc., 991 F.2d 426, 431–34 (8th Cir. 1993).

77. *See* Transparent-Wrap Mach. Corp. v. Stokes & Smith Co., 329 U.S. 637 (1947).

78. *See* United States v. Associated Patents, Inc. 134 F. Supp. 74, 82 (E.D. Mich. 1955), *aff'd mem. sub nom.* Mac Inv. Co. v. United States, 350 U.S. 960 (1956); United States v. Besser Mfg. Co., 96 F. Supp. 304, 311 (E.D. Mich. 1951), *aff'd*, 343 U.S. 444 (1952); United States v. Gen. Elec. Co., 80 F. Supp. 989, 1005–06 (S.D.N.Y. 1948); United States v. Nat'l Lead Co., 63 F. Supp. 513, 524 (S.D.N.Y. 1945), *aff'd*, 332 U.S. 319 (1947).

79. *See* Bruce B. Wilson, Deputy Assistant Attorney General, Antitrust Division, Remarks Before the Annual Joint Meeting of the Michigan State Bar Antitrust Law Section and the Patent Trademark and Copyright Law Section (Sept. 21, 1972), *excerpted in* [1969–1983 Current Comment Transfer Binder] Trade Reg. Rep. (CCH) ¶ 50,146, at 55,248 (Oct. 9, 1972).

80. *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 343 (1971) ("[T]he Court has condemned attempts to broaden the physical or temporal scope of the patent monop-

not necessarily limited to, all attempts to extend the market power provided by a patent beyond the terms of the patent grant that violate the antitrust laws[81] and renders the patent unenforceable until the misuse is purged.[82] Some courts have held that grantback provisions constitute patent misuse, because they represented an attempt by the patent holder to control innovations that fell outside of the patent's scope.[83]

Over time, antitrust law has become more accommodating toward grantback provisions. The Justice Department began to take a more hospitable stance towards grantback clauses during the 1980s, adopting a "rule of reason" approach that permits grantback provisions absent a showing of actual anticompetitive effect.[84] A 1988 statutory amendment explicitly provided that grantback provisions only constitute patent misuse if the patent holder possesses market power.[85] Furthermore, the current *Antitrust Guidelines for the Licensing of Intellectual Property* recognize that grantback provisions "can have procompetitive effects, especially if they are nonexclusive" and "may be necessary to ensure that the licensor is not prevented from effectively competing because it is denied access to improvements developed with the aid of its own technology."[86] Accordingly, the *Guidelines* clearly provide that grantback clauses will be evaluated under the rule of reason, focusing on "whether the licensor possesses market power in a relevant technology or innovation market," whether the grantback provision "is likely to reduce significantly licensees' incentives to invest in improving the li-

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oly."); Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 492–93 (1942) (offering the seminal discussion of patent misuse).

81. Interestingly, the U.S. Courts of Appeals are split over whether patent misuse requires proof of a completed antitrust violation. *Compare, e.g.*, USM Corp. v. SPS Techs., Inc., 694 F.2d 505, 512 (7th Cir. 1982) (holding that conduct must rise to the level of an antitrust violation to constitute patent misuse), *with* C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1372 (Fed. Cir. 1998) (concluding that "[p]atent misuse is viewed as a broader wrong than antitrust violation" and that "misuse may arise when the conditions of antitrust violation are not met").

82. *See* U.S. Gypsum Co. v. Nat'l Gypsum Co., 352 U.S. 457, 465 (1957); *Morton Salt*, 314 U.S. at 493; Unitherm Food Sys., Inc, v. Swift-Eckrich, Inc., 375 F.3d 1341, 1356 (Fed. Cir. 2004).

83. *See* Duplan Corp. v. Deering Milliken, Inc., 444 F. Supp. 648, 671–72, 700 (D.S.C. 1977) (holding that mandatory assignment of improvements did not violate antitrust laws, but did constitute patent misuse), *aff'd*, 594 F.2d 979 (4th Cir. 1979).

84. *See* Jere M. Webb & Lawrence A. Locke, *Intellectual Property Misuse: Developments in the Misuse Doctrine*, 4 HARV. J.L. & TECH. 257, 261–62 (1991).

85. *See* 35 U.S.C. § 271(d)(5) (2000).

86. U.S. DEPT. OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 5.6, at 30 (1995), *available at* http://www.usdoj.gov/atr/public/guidelines/0558.pdf.

censed technology," and "the extent to which the grantback provision has offsetting procompetitive effects."[87]

Similar issues arise with respect to copyright. In 1990, a U.S. Court of Appeals drew an analogy to patent misuse doctrine to recognize a parallel doctrine of copyright misuse.[88] Although courts have yet to address the issue, commentators have suggested that grantback clauses could constitute copyright misuse.[89] Indeed, IBM appears to have so argued in the process of defending a copyright infringement suit brought by Unix-owner SCO.[90] The *Guidelines* also make clear that nonexclusive grantbacks, like those in open source licenses, are less likely to have anticompetitive effects.[91] In addition, with respect to copyright, attempts to control derivative works may not be properly regarded as an attempt to expand the scope of copyright protection. In contrast to U.S. patent law, under which follow-on innovations are independently patentable, U.S. copyright law does not grant follow-on innovators independent protection and instead regards any unauthorized derivative works as infringement.[92] As a result, grantback terms may be less likely to be regarded as attempts to extend the scope of copyright protection beyond the statutory grant.[93] Conversely, the fact that follow-on innovations receive no protection under copyright law arguably undercuts any suggestion that this provision is necessary to preserve the licensor's ability to compete.

The viral aspects of the open source license raise far greater concerns. To the extent that the licensing provision attempts to exert control over

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87. *Id.*

88. *See* Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970 (4th Cir. 1990). On the history of copyright misuse, see Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111, 151–58 (1999). As is the case with patent misuse, the U.S. Courts of Appeals are split over whether conduct that does not rise to the level of an antirust violation can constitute copyright misuse. *Compare, e.g.*, Saturday Evening Post Co. v. Rumbleseat Press, Inc., 816 F.2d 1191, 1200 (7th Cir. 1987) (holding that conduct must rise to a level of an antitrust violation to constitute copyright misuse), *with Lasercomb*, 911 F.2d at 978 (taking the position "a misuse need not be a violation of antitrust law").

89. *See* Christian H. Nadan, *Open Source Licensing: Virus or Virtue?*, 10 TEX. INTELL. PROP. L.J. 349, 369 (2002); Ian N. Feinberg, *Antitrust Issues in Intellectual Property Licensing Agreements*, 845 PRACTISING LAW INST.: PATENTS, COPYRIGHTS, TRADEMARKS, & LITERARY PROP. COURSE HANDBOOK SERIES 661, 707; Kevin J. O'Connor, *A Primer on Vertical Restraint Law Applied to Intellectual Property—Is Microsoft Really a Vertical Restraints Case?*, A.L.I.-A.B.A. CONTINUING LEGAL EDUC., Mar. 17, 2005, at 7, *available at* http://www.gklaw.com/docs/publications/375.pdf.

90. *See* Sapna Kumar, *Enforcing the GNU GPL*, 2006 U. ILL. J.L. TECH. & POL'Y 1, 34.

91. *See* U.S. DEPT. OF JUSTICE & FED. TRADE COMM'N, *supra* note 86, § 5.6, at 30.

92. *See, e.g.*, Anderson v. Stallone, 11 U.S.P.Q.2d 1161, 1173–74 (C.D. Cal. 1989).

93. *See* Feinberg, *supra* note 89, at 707.

unrelated and preexisting intellectual property that are not derivative improvements of the open source software, it may be struck down under copyright misuse as an impermissible attempt to exercise rights beyond those granted by copyright. If so, the copyright would be unenforceable until the misuse is purged, and follow-on innovators would be free to commercialize open source code.[94] At the same time, the *Antitrust Guidelines* also make clear that nonexclusive grantbacks, like those in open source licenses, are less likely to have anticompetitive effects.[95] Thus, one can see that certain aspects of open source licenses are potentially suspect under U.S. copyright law.

European law has no direct analogue to the copyright misuse doctrine. Although civil law recognizes a similar sounding doctrine known as "abuse of right," this doctrine is reserved for extreme situations and is not commonly used to correct the alleged unfairness of contractual agreements.[96] European Union law has adopted an increasingly permissive stance toward requirements that licensees assign or license back rights to any follow-on improvements.[97] The EC Treaty permits the European Commission to exempt conduct from antitrust-style scrutiny either on a case-by-case basis or through categorical "block exemptions." [98] In 1996, the EC adopted the Technology Transfer Block Exemption (TTBE) regulation to cover certain IP licensing practices. Most importantly for our purposes, the 1996 TTBE did not exempt license terms requiring the licensee to assign back to the licensor rights to any improvements or new applications based on the licensed technology.[99] The inclusion of an assign-back term placed the entire licensing agreement outside the scope of the exemption provided by the TTBE. The

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94. *See* Nadan, *supra* note 89, at 369–70.

95. *See* U.S. DEPT. OF JUSTICE & FED. TRADE COMM'N, *supra* note 86, at 30.

96. *See* Jacques De Werra, *Moving Beyond the Conflict Between Freedom of Contract and Copyright Policies: In Search of a New Global Policy for On-Line Information Licensing Transactions*, 25 COLUM. J.L. & ARTS 239, 338–39 (2003).

97. *See generally* Fiona Carlin & Stephanie Pautke, *The Last of Its Kind: The Review of the Technology Transfer Block Exemption Regulation*, 24 NW. J. INT'L L. & BUS. 601 (2004).

98. The principal provision covering agreements that restrict competition under the original EC Treaty was Article 85. *See* Treaty Establishing the European Economic Community art. 85, Mar. 25, 1957, 298 U.N.T.S. 11, 47–48. The 1999 Treaty of Amsterdam renumbered this provision Article 81. *See* Consolidated Version of the Treaty Establishing the European Community art. 81, Nov. 10, 1997, 1997 O.J. (C 340) 173, 208–09, *available at* http://europa.eu.int/eur-lex/lex/en/treaties/dat/11997E/htm/11997E.html#0173010078.

99. Commission Regulation 240/96, art. 3, para. 6, 1990 O.J. (L31) 2, 9 (EC), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996R0240:EN:HTML.

1996 TTBE did exempt provisions that required the licensee to license any improvements back to the licensor provided that (1) in the case of severable improvements the license was nonexclusive and (2) the licensor grants an exclusive or non-exclusive license to his own improvements to the licensee.[100]

Over time, the EC began to recognize that its formalistic, categorical approach failed to take into account whether the licensor possessed market power or whether the agreement was likely to have any anticompetitive effects. As a result, the 1996 TTBE was discouraging a great deal of IP licensing that would have enhanced competition and economic efficiency. These concerns led the EC to adopt a new TTBE in 2004 that imposed market share thresholds that must be met before certain licensing practices would be subject to Article 81.[101] Like the 1996 TTBE, the new TTBE mandates that provisions which require the licensee to assign back or grant exclusive licenses to any improvements are not exempt from Article 81.[102] In other ways, the new TTBE took a more permissive approach toward grantbacks on improvements.[103] For example, provisions requiring nonexclusive licenses to any improvements need no longer be reciprocal to remain legal.[104] Even more importantly, under the 1996 TTBE, the inclusion of an overly restrictive grantback or assign-back term took the entire licensing agreement outside the scope of the TTBE and thus subjected the entire agreement to Article 81. Under the current TTBE, the inclusion of such terms only renders those terms nonexempt without affecting the validity of the remainder of the agreement.[105]In short, U.S. law is likely to subject the viral licensing provisions to the rule of reason, while reciprocal and nonexclusive grantback provisions such as those generally contained in open source licenses are likely to be exempt from antitrust-style scrutiny under either the 1996 or the 2004 TTBEs. The enforceability of open source licenses may thus

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100. *Id.* art. 2, para. 1(4), at 7.

101. Commission Regulation 772/2004, art. 3, 2004 O.J. (L 123) 11, 14 (EC), *available at* http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_123/l_12320040427en00110017.pdf.

102. *Id.* art. 5, para. 1(a)-(b), at 16.

103. *See* Makan Delrahim, *The Long and Winding Road: Convergence in the Application of Antitrust to Intellectual Property*, 13 GEO. MASON L. REV. 259, 262 n.10 (2005) (noting that "the revised TTBE is much more tolerant of once black-listed restraints, such as exclusive grantbacks on improvements").

104. *See* Carlin & Pautke, *supra* note 97, at 616.

105. *See id.*; Isabel Davies & Nick Bolter, *Trade Mark Licenses and the Technology Transfer Block Exemption*, 94 TRADEMARK REP. 899, 907 (2004).

vary with the particular national law most closely associated with a particular piece of software. This conclusion effectively raises serious doubts about claims that open source licensing can constitute an autonomous enforcement regime that is independent of national or international law.

2. *Patent*

National variations in patent law represent an even more significant potential restriction on open source software. As was the case with copyright, the leading international patent treaties, such as the Paris Convention for the Protection of Industrial Property of 1883 and the Trade-Related Aspects of Intellectual Property (TRIPs) Agreement, each simply set forth minimum levels of patent protection, while leaving individual nations free to provide additional protection as they saw fit. One particular area of international divergence was with respect to software patents, which receive different treatment in different areas of the world. After exhibiting considerable resistance to permitting the patenting of software,[106] U.S. law eventually adopted a more sympathetic stance toward software patents[107] and eventually began to regard software as patentable subject matter.[108]

European nations have adopted a more skeptical stance towards software patents. The European Patent Convention, which despite its name is not an act of the European Union but rather a multilateral treaty, has long taken the position that software is not patentable,[109] and on July 6, 2005, the European Parliament overwhelming rejected a European Commission proposal that would have authorized software patents.[110] Notwithstanding this rejection, the European Patent Office and national patent offices of EU member states have construed the limitation narrowly, issuing thousands of patents on the grounds that, while European law prohibits the patenting of naked algorithms, it does not bar patenting

106. *See* Parker v. Flook, 437 U.S. 584 (1978); Gottschalk v. Benson, 409 U.S. 63 (1972).

107. *See* Diamond v. Diehr, 450 U.S. 175 (1981).

108. *See In re* Alappat, 33 F.3d 1526 (Fed. Cir. 1994).

109. *See* Convention on the Grant of European Patents (European Patent Convention) arts. 52(2)(c), 52(3), Oct. 5, 1973, 13 I.L.M. 268, 285, *available at* http://www.european-patent-office.org/legal/epc/e/ma1.html#CVN.

110. *See* Patentability of Computer-Implemented Inventions, 2006 O.J. (C 157 E) 95 (reporting the July 6, 2005, rejection of the proposed directive on the patentability of software).

the application of an algorithm to a particular technical problem.[111]

Differences in the validity of software patents in the U.S. and Europe has a potentially dramatic impact on open source licenses. As noted earlier, open source licenses focus primarily on copyright. Unlike licenses for proprietary software, which typically indemnify licensees against patent infringement claims filed by third parties, open source licenses take a more modest approach, simply including a warranty of "provenance" stating that the licensor believes that its contributions are original and noninfringing. The risk of patent liability is thus quite real. One study reports that the Linux kernel infringes 283 issued patents.[112] There are, to be sure, many practical obstacles to the filing of patent infringement actions. Given the decentralized manner in which open source software is distributed, patent holders may well find it quite difficult to identify infringers. That said, some residual danger of liability remains, and the scope of this danger, of course, depends upon the validity of software patents, which in turn is completely dependent on national law.

D. Arbitration as a Potential Solution

One potential solution to the problems of nonuniversality and nonautonomy of open source software could be solved by committing the resolution of open source disputes to arbitration. So long as nations remain willing to compel arbitration and enforce arbitral awards, committing decisionmaking to arbitrators would allow the development of uniform principles independent from national law.

1. Copyright

Scholars have begun to call for the development of uniform, transnational copyright norms independent of the laws of any national system through arbitration.[113] The merits of developing such law in an arbitral

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111. *See* David S. Evans & Anne Layne-Farrar, *Software Patents and Open Source: The Battle over Intellectual Property Rights*, 9 VA. J.L. & TECH. 10, ¶ 13 & n.36 (2004), http://www.vjolt.net/vol9/issue3/v9i3_a10-Evans.pdf.

112. *See* Sean Michael Kerner, *Linux's Patent Risk*, INTERNETNEWS, Aug. 2, 2004, http://www.internetnews.com/dev-news/article.php/3389071.

113. *See* Graeme B. Dinwoodie, *A New Copyright Order: Why National Courts Should Create Global Norms*, 149 U. PA. L. REV. 469, 522–28 (2000).

forum draws support from the IBM-Fujitsu case,[114] in which the arbitrators were able to compensate for the undeveloped state of the law by fashioning remedies of their own.[115]

Any such solution would be limited by the uncertainty about arbitrability of copyright issues. Countries vary widely in the extent to which they permit arbitration of copyright-related issues. In the United States, it is now clear that copyright-related disputes are arbitrable.[116] In *Kamakazi Music Corp. v. Robbins Music Corp.*, the U.S. Court of Appeals for the Second Circuit held that no public interest considerations existed that would prohibit arbitration of copyright infringement claims.[117] In so holding, the court reserved judgment on the question of whether copyright validity was arbitrable, which the court appeared to acknowledge potentially raised more serious public interest concerns.[118]

In *Saturday Evening Post Co. v. Rumbleseat Press, Inc.*, the U.S. Court of Appeals for the Seventh Circuit addressed the issue reserved by the Second Circuit in *Kamakazi Music*, holding that an arbitrator may determine the validity of a copyright when the issue arises in a copyright license lawsuit.[119] The court noted that the Supreme Court did not consider antitrust to raise a sufficient threat to public policy to justify preventing arbitrability. Copyright raised even fewer public interest concerns, since the "monopolies" granted by copyright were less problematic than those redressed by the antitrust laws, given that whatever market power a copyrighted work enjoyed could be easily circum-

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114. Int'l Bus. Mach. Corp. v. Fujitsu Ltd., No. 13T-117-0636-85 (Am. Arb. Ass'n Commercial Arb. Trib. Nov. 29, 1988) (Mnookin & Jones, arbs.) *reprinted in* 1 ARB. MATERIALS 5 (1989).

115. *See* Alisa E. Anderson, *The Future of Software Copyright Protection: Arbitration v. Litigation*, 12 HASTINGS COMM. & ENT. L.J. 1, 17–32 (1989); Christian Bühring-Uhle, *The IBM-Fujitsu Arbitration: A Landmark in Innovative Dispute Resolution*, 2 AM. REV. INT'L ARB. 113 (1991). Resolving these issues through arbitration necessarily forecloses an opportunity for judicial development of the law, which would have greater precedential effect. *See* Ronald L. Johnson, *The* IBM-Fujitsu *Arbitration Revisited—A Case Study in Effective ADR*, COMPUTER LAW., May 1990, at 13, 16; John V. O'Hara, Comment, *The New Jersey Alternative Procedure for Dispute Resolution Act: Vanguard of a "Better Way"?*, 136 U. PA. L. REV. 1723, 1749–50 (1988).

116. *See* David W. Plant, *Arbitrability of Intellectual Property Issues in the United States*, *in* WORLD INTELLECTUAL PROP. ORG., WORLDWIDE FORUM ON THE ARBITRATION OF INTELLECTUAL PROPERTY DISPUTES 29, 36–38 (1994); William Grantham, Comment, *The Arbitrability of International Intellectual Property Disputes*, 14 BERKELEY J. INT'L L. 173, 216 (1996).

117. 684 F.2d 228, 231 (2d Cir. 1982).

118. *Id.*

119. 816 F.2d 1191, 1199 (7th Cir. 1987) (Posner, J.).

vented by the creation of close substitutes.[120] Furthermore, Congress had enacted legislation expressly authorizing the arbitration of patent validity. Given the more problematic nature of patents, copyright represented an *a fortiori* case.[121] The Seventh Circuit reconfirmed this holding in *Hill v. Gateway 2000, Inc*., which upheld an arbitration clause contained in a shrinkwrap license.[122] Although courts occasionally invalidate arbitration clauses in shrinkwrap and clickwrap licenses because of unconscionability or inadequate consent,[123] they now have little hesitation in enforcing arbitration clauses in cases when the contract has been properly formed.[124]

A recent survey of the arbitrability of copyright disputes in other countries revealed a wide variety of practices. Some countries, such as Belgium, Germany, Japan, and Switzerland, follow the U.S. approach and permit arbitration of all aspects of software copyrights, including disputes over licensing, infringement, and validity.[125] Other countries, such as Brazil, Israel, and Spain, permit arbitration over disputes about licensing and infringement, but do not permit arbitration of copyright validity.[126] Still others, including China, do not permit arbitration of either licensing disputes or validity.[127] It is thus far from clear that the inclusion of arbitration clauses in open source licenses would necessarily provide open source software with the universality and autonomy associated with the lex mercatoria.

2. *Patent*

Patent law poses even more difficult questions of arbitrability. Recent

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120. *Id.* at 1198–99.

121. *Id.* at 1199.

122. 105 F.3d 1147 (7th Cir. 1997).

123. *See* Specht v. Netscape Commc'ns Corp., 306 F.3d 17, 28–35 (2d Cir. 2002); Comb v. PayPal, Inc., 218 F. Supp. 2d 1165, 1172–77 (N.D. Cal. 2002); Klocek v. Gateway, Inc., 104 F. Supp. 2d 1332, 1335–42 (D. Kan 2000); Aral v. Earthlink, Inc., 36 Cal. Rptr. 3d 229, 235–37 (Ct. App. 2005); Brower v. Gateway 2000, Inc., 676 N.Y.S.2d 569, 573–75 (App. Div. 1998); Licitra v. Gateway, Inc., 734 N.Y.S.2d 389, 394–98 (Civ. Ct. 2001); DeFontes v. Dell Computers Corp., No. C.A. PC 03-2636, 2004 WL 253560 (R.I. Super. Ct. Jan. 29, 2004).

124. *See In re* RealNetworks, Inc., No. 00 C 1366, 2000 WL 631341 (N.D. Ill. May 8, 2000); Lieschke v. RealNetworks, Inc., No. 99 C 7274, 2000 WL 198424 (N.D. Ill. Feb. 11, 2000); Westendorf v. Gateway 2000, Inc., No. 16913, 2000 WL 307369 (Del. Ch. Mar. 16, 2000); Stenzel v. Dell, Inc., 870 A.2d 133, 138–46 (Me. 2005).

125. *See* Grantham, *supra* note 116, at 202, 208, 210–12.

126. *See id.* at 216–19.

127. *See id.* at 204.

surveys reveal a wide diversity of practices with respect to the arbitrability of patent disputes.[128] For example, while U.S. law has long been hospitable to the arbitration of disputes over patent licenses,[129] U.S. courts have taken a far different stance with respect to patent validity. The U.S. Supreme Court tangentially addressed the issue in *Lear, Inc. v. Adkins*, in which the Court eliminated a doctrine called "licensee estoppel" that until then barred anyone who had licensed a patent from challenging its validity.[130] The Court saw the case as requiring a balance between two conflicting sets of policies. On the one hand were the policies underlying contract law, which enforced the intentions of the parties and attempted to prevent parties from repudiating their promises simply because they became dissatisfied with their bargain.[131] On the other hand were the policies underlying patent law, which reflected "the important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain."[132] The Court regarded the public interest embodied in patent law as more important and refused to allow language in a patent license to trump the licensee's ability to challenge the validity of the license in court. In the words of the Court, "[w]e think it plain that the technical requirements of contract doctrine must give way before the demands of the public interest."[133]

For this reason, lower courts subsequently held that patent validity questions "are inappropriate for arbitration proceedings and should be decided by a court of law, given the great public interest in challenging invalid patents."[134] Indeed, one court found "universal agreement that, at least insofar as the issue of patent *validity* is concerned, arbitration is inappropriate."[135]

U.S. hostility toward arbitration of patent validity would end with the

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128. *See* M.A. Smith et al., *Arbitration of Patent Infringement and Validity Issues Worldwide*, 19 HARV. J.L. & TECH. 299, 320–56 (2006); Grantham, *supra* note 116, at 199–220.

129. *See, e.g.*, Schweyer Elec. & Mfg. Co. v. Regan Safety Devices Co., 4 F.2d 970, 974 (2d Cir. 1925).

130. 395 U.S. 653, 670 (1969).

131. *Id.*

132. *Id.*

133. *Id.*

134. Beckman Instruments, Inc. v. Technical Dev. Corp., 433 F.2d 55, 63 (7th Cir. 1970); *accord* Hanes Corp. v. Millard, 531 F.2d 585, 593–94 (D.C. Cir. 1976); Diematic Mfg. Corp. v. Packaging Indus., Inc., 381 F. Supp. 1057, 1061–63 (S.D.N.Y. 1974); Lessona Corp. v. Cotwool Mfg. Corp., 204 F. Supp. 141 (W.D.S.C. 1962), *aff'd*, 315 F.2d 538 (4th Cir. 1963); Zip Mfg. Co. v. Pep Mfg. Co., 44 F.2d 184, 188 (D. Del. 1930).

135. Foster Wheeler Corp. v. Babcock & Wilcox Co., 440 F. Supp. 897, 901 (S.D.N.Y. 1977).

enactment of 1982 legislation specifically permitting the arbitration of all patent validity, enforceability and infringement disputes.[136] A 1984 amendment further allowed arbitral resolution of a Patent Office proceeding known as an "interference," through which current patent holders can contest a pending patent application.[137] Since then, U.S. law has been largely open to arbitral resolution of patent disputes.

The practices of other countries vary widely. Some countries, such as Belgium and Switzerland, appear to follow the U.S.'s approach and allow arbitration of both patent validity and licensing.[138] Others, such as Brazil, Finland, France, Italy, Spain, and Sweden, appear to permit arbitration of licensing issues, but prohibit arbitration of patent validity.[139] Still others, such as Canada, Germany, Israel, Japan, and the Netherlands, appear to permit arbitration of validity, but limit the enforcement of the arbitral judgment to the parties to the arbitration.[140] Still others, such as China, effectively bar arbitration of any aspect of patent law.[141] These differences in various countries' willingness to arbitrate patent-related issues limit the extent to which arbitration can serve as an autonomous and universal basis for resolving patent disputes over open source technologies.

CONCLUSION

The concept of a stateless, transnational, universal body of law generated from the bottom up by actual commercial practices has long captured the imagination of transnational law scholars. Tying the concept of Internet regulation to the long historical tradition associated with the lex mercatoria fosters a pragmatic sense of connectedness and legitimacy. Equally importantly, the vision that these norms would emerge from the bottom up outside the control of sovereign nations carries considerable appeal. The fact that many Internet scholars find the vision of the lex mercatoria enticing should also come as no surprise. Internet users have long shared a desire for uniform rules for global interoperability built on

136. 35 U.S.C. § 294 (2000).

137. *Id.* § 135(d).

138. *See* Grantham, *supra* note 116, at 201–02, 211–12.

139. *See* Smith et al., *supra* note 128, at 333; Grantham, *supra* note 116, at 206–07, 209, 216–18, 219–20.

140. *See* Smith et al., *supra* note 128, at 328–29, 330–31, 333–37, 339–40, 352, 354–55; Grantham, *supra* note 116, at 207–08, 210, 217, 218–19.

141. *See* Smith et al., *supra* note 128, at 345–47; Grantham, *supra* note 116, at 204–05.

a foundation of decentralized, user-defined self-governance free from governmental interference.

Upon closer inspection, debates about Internet self-governance run aground on many of the same issues that characterize the debate over the lex mercatoria. After all, e-commerce is just *one* of the different sectors of trade in which lex mercatoria is applied, since its rules are part of the basic sources of contemporary international business law.

As enticing as the image of a spontaneous, universal, and autonomous legal order may be, the reality is that most legal systems retain, at different speeds, a number of deep interdependencies with national law and its control mechanisms. Given the controversies that have long surrounded the original debates about the lex mercatoria, that attempts to extend the same concepts into Internet governance would run afoul of the same problems should come as no surprise.