Texas Law Review

Volume 81, Number 3, February 2003

Article

The New, New Property

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Introduction

Surveying the history of property from his vantage point a century ago, Pierre-Joseph Proudhon observed famously, "Property is theft!"[1] The premise of this Article is to wonder whether a future Proudhon will review the distribution of resources in the new, new world of cyberspace and declare their origins to be similarly illegitimate. The disappointing answer offered here is that, indeed, a future Proudhon appraising our current system of cyberspace resource entitlements would make a similar declaration. The hopeful suggestion offered here is that it is not too late to avoid that fate.

1. PIERRE-JOSEPH PROUDHON, WHAT IS PROPERTY? 13 (Cambridge Univ. Press 1994) (1840).

Control over domain names vests in a person dominion over important cultural and economic resources. For example, the largest reported gathering of humanity, the Kumbh Mela festival, occurs every dozen years at the confluence of the Yamuna, Ganges, and the mystical Saraswati rivers in India. KumbhMela.com, however, is registered to a company in Berkeley, California. The entity controlling a domain name that represents the natural place on the Internet for people to gather information or build community about any particular subject immediately gains a powerful voice in that community, perhaps even the power to help define that subject. The power that a domain name entails is not lost, for example, on the Chinese government, whose state-owned news agency, Xinhua, is a joint venturer in China.com.[2] A growing secondary market in domain names demonstrates their economic value, with prices ranging in the millions for especially attractive names such as Business.com or Loans.com.[3] Even the service industry that has grown up around these names is big business, with the largest provider of domain names acquired in 2000 for $21 billion.[4] Given their cultural and economic value, disputes over domain name entitlements are inevitable, and recent cases have asked us to decide, for example, who are the rightful owners of SouthAfrica.com,[5] Barcelona.com,[6] JewsForJesus.org,[7] Sex.com,[8] and Madonna.com.[9]

The rules we write for deciding such disputes have clear international impact, yet little attention has been paid to constructing a just global regime

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2. *See* http://corp.china.com/about_china/overview.html (last visited Oct. 9, 2002) (listing AOL Time Warner and the Chinese state news agency, Xinhua, as major shareholders of China.com).

3. Andrew Pollack, *What's in a Cybername? $7.5 Million for the Right Address*, N.Y. TIMES, Dec. 1, 1999, at C8 (reporting that business.com sold for $7.5 million); *Loans.com Web Address Auctioned for $3 Million*, WALL ST. J., Jan. 31, 2000, at B6.

4. David E. Kalish, *VeriSign Buys Network Solutions for $21 Billion*, CHI. SUN-TIMES, Mar. 7, 2000, at 4.

5. John Markoff, *South Africa Is Seeking the Return of a Cyberspace Address*, N.Y. TIMES, Mar. 3, 2001, at C2 (reporting that South Africa seeks transfer of SouthAfrica.com from VirtualCountries, Inc., which has registered more than 30 country names).

6. *See* Excelentisimo Ayuntamiento de Barcelona v. Barcelona.com, Inc. (Spain v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0505 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0505.html (ordering transfer of Barcelona.com from a Barcelona city resident to the City Government of Barcelona).

7. Jews for Jesus v. Brodsky, 993 F. Supp. 282 (D.N.J.), *aff'd*, 159 F.3d 1351 (3rd Cir. 1998) (holding that a critic of the religious organization infringed on the organization's trademark when he employed its name as the domain name for his website).

8. Kremen v. Cohen, No. 01-15899 (9th Cir. Jan. 3, 2003); Keith Regan, *The Real Price of Sex.com*, E-COMMERCE TIMES, Apr. 11, 2001, *at* http://www.ecommercetimes.com/perl/story/8830.html.

9. *See* Madonna Ciccone v. Dan Parisi (U.S. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0847 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0847.html (ordering the transfer of Madonna.com from a pornographer to the celebrity named "Madonna"). *See also* Julia Fiona Roberts v. Russell Boyd (U.S. v. U.S.), WIPO Case No. D2000-0210 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0210.html (ordering the transfer of JuliaRoberts.com from a New Jersey resident to the actress).

in domain names. Domain names should figure into international law debates for a number of reasons. First, they determine who has global rights to geographic and cultural identifiers.[10] South Africa has even denounced an American corporation's registration of SouthAfrica.com as re-inscribing "the colonial experience."[11] Second, domain names present a case study in the possibility of global governance, with the Internet authority ICANN as a world executive and the World Intellectual Property Organization as its judicial arm. Third, domain names represent a valuable resource of the Information Age. Their international distribution thus has important wealth consequences. Indeed, as commerce becomes increasingly electronic, corporations that own prominent, mnemonic domain names may be best positioned to become global leaders in their industries. As useful domain names are grabbed up by Western entrepreneurs, the domain name regime may help further entrench the existing worldwide maldistribution of wealth. Selling their goods and services through cyberspace, the global corporations of tomorrow, like the global corporations of today, will be largely Western.

The grand narrative of this new century may well be the continual expansion of advantage of the few in one domain into another domain, as ever new frontiers are conquered. The meek and poor may never inherit the earth. This Article seeks to disrupt this narrative by calling attention to the hidden bias of formally equal rules in domains as seemingly arcane as those of cyberspace. The Article thus offers a sustained critique of first-come, first-served property regimes, especially from the perspective of global wealth distribution. Because today's most important first possession regimes lie in intellectual property, this critique calls into question the foundations of the increasingly internationalized intellectual property system.[12]

The Article also finds cyberlaw scholarship generally wanting for its inadequate regard for important human values of equality and distributive justice. Current cyberlaw scholarship seems motivated by a vision of society concerned principally with free speech, intellectual creativity, privacy, and autonomy. Concerns for equality and distributive justice are greatly

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10. *See, e.g.*, Katherine Baldwin, *Cybersquatters Invade Amazon: Florida Woman Claims Web Domain Name of Primitive Indian Tribe*, S. FLA. SUN-SENTINEL, Oct. 26, 2000, at 20A, *available at* 2000 WL 22204828 (noting that a Brazilian native tribe wishes to claim Yanomami.com from its Florida registrant).

11. Markoff, *supra* note 5.

12. A recent United Kingdom government report observes the difficulties a first possession regime in intellectual property poses for developing nations which are often "second comers" to certain types of technological innovation. Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development Policy* (Sept. 2002), *available at* http://www.iprcommission.org/papers/pdfs/final_report/CIPR_Exec_Sum.pdf ("Developing countries negotiate [intellectual property rights] from a position of relative weakness. The difficulty is that they are 'second comers' in a world that has been shaped by the 'first comers.'").

neglected.[13] I hope in this Article to introduce these concerns as central values in constructing rules for the Information Age.

In the process of constructing these rules, we should not view any rule as *natural*. Such an approach would be especially anomalous, of course, in the wholly *artificial* realm of cyberspace. But I will go further, arguing that certain rules should not be viewed as natural even for the natural world. My principal target is the hoary rule of first possession, which I hope to show as unattractive because of its distributional consequences.

The methodology of the Article is to study philosophy, history, economics, and international law to craft a just international property rights regime in cyberspace. But as cyberlaw can learn from other disciplines, these disciplines can also gain from the engagement. Cyberlaw scholarship must be seen not as an effort to simply apply old rules to a new domain, *mutatis mutandis*, but as an invitation to revisit the traditional principles themselves.

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13. There are some notable exceptions. Consider Keith Aoki's concern for international equity in cyberspace:

> The distributive patterns produced by the intersection of a particular form of the sovereign nation-state (and their related intellectual property and other laws) and the Internet may tend to favor the "public" sovereignties of developed nations such as the United States. These patterns may also favor the "private" sovereignty of firms that function in a transnational mode but that are economically linked to the nations of the developed world. This favoritism occurs at the expense of poorer nations, groups, and individuals in the developing regions of the world and in pockets of immiseration within the developed world.

Keith Aoki, *Considering Multiple and Overlapping Sovereignties: Liberalism, Libertarianism, National Sovereignty, "Global" Intellectual Property, and the Internet*, 5 IND. J. GLOBAL LEGAL STUD. 443, 445–46 (1998). Lawrence Lessig has also noted the importance of considering equality with respect to cyberspace. *See, e.g.*, LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 220 (1999) [hereinafter LESSIG, CODE] ("The values of free speech, privacy, due process, and equality define who we are. If there is no government to insist on these values [in cyberspace], who will do it?"); Lawrence Lessig, *Commons and Code*, 9 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 405, 416 (1999) (arguing against excessively strong intellectual property rights in cyberspace because "the values of universality and equality demand the preservation of a commons"); *see also* Neil Weinstock Netanel, *Cyberspace Self-Governance: A Skeptical View From Liberal Democratic Theory*, 88 CAL. L. REV. 395, 452 (2000) (arguing that an unregulated cyberspace would be detrimental to minority interests); Dan L. Burk, *Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks*, 68 TUL. L. REV. 1, 50–51 (1993) (noting a disparity between "information rich" and "information poor" nations, leading to the possibility that developed nations are employing information superiority in a form of "neo-colonization"). In his study of racial identity in cyberspace, Jerry Kang espouses equality norms in virtual communities. *See* Jerry Kang, *Cyber-Race*, 113 HARV. L. REV. 1130, 1204 (2000). Shubha Ghosh points out the need to consider "the distributive justice issues raised by intellectual property." Shubha Ghosh, *The Merits of Ownership; or, How I Learned to Stop Worrying and Love Intellectual Property*, 15 HARV. J.L. & TECH. 453, 456 (2002). Scholars seeking to employ technology in the aid of a "semiotic democracy" place equality in the process of cultural creation and meaning production at the heart of their endeavor. *See, e.g.*, William W. Fisher III, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203, 1217–18 (1998). On "semiotic democracy," see generally JOHN FISKE, TELEVISION CULTURE 236–39 (1983).

The Article proceeds as follows. Part I reveals how the existing property rights system for domain names perpetuates inequality in the distribution of wealth. Like the fox in *Pierson v. Post*,[14] domain names are now generally subject to the rule of first possession, with domain names handed out for a nominal sum on a first-come, first-served basis. By rewarding domain names to those technologically adept and wealthy enough to grab available domain names on a first-come, first-served basis, our current system replicates real-world inequalities in cyberspace.

Part II demonstrates that the rule of first possession works to deepen inequality. Upon examination, the rule of first possession is revealed to be based less on moral reasoning than on an assertion of power. A close analysis further demonstrates that the existing domain name system cannot be defended on any of the Lockean, utilitarian, or Hegelian rationales upon which we traditionally rely to justify private property rules.

In Part III, I argue that domain names should be seen as a new form of *international* property—a global commons of the Information Age, alongside the traditional global commons of the oceans, outer space, and Antarctica.

In seeking to craft a new property rights regime for domain names, Part IV looks for more lessons in the history of the young American nation's acquisition and disposition of public lands.[15]

Part V offers my proposal for a just global privatization, informed by the philosophical, historical, and legal analysis of the earlier Parts. A just regime would be structured so that the privatization of domain names benefits all of the people of the world.

The economist may well demur, arguing that how we award domain names does not matter because the invisible hand of the market will correct any errors in the initial entitlements. In conditions of minimal transaction costs, the efficient outcome will be reached, as Coase taught us,[16] regardless of where the initial entitlement vests. In Part VI, I respond to this and other objections to my thesis.

The Article offers a template for considering the questions that the Information Age will inevitably raise in the future upon the creation of new, yet undreamed of, things: Should we think of the new artifact as technology (the province of system operators), contract (the province of the market), or

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14. 3 Cai. R. 175 (N.Y. Sup. Ct. 1805).

15. On the acquisition of public land, see PAUL W. GATES, HISTORY OF PUBLIC LAND LAW DEVELOPMENT 75–86 (1968); GEORGE CAMERON COGGINS ET AL., FEDERAL PUBLIC LAND AND RESOURCES LAW 44–55 (3d ed. 1993) (describing the evolution of public land acquisition in the United States).

16. *See* R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 9–15 (1960) (explaining that if a dispute arises between two parties regarding the use or ownership of property, the parties need only conduct a cost-benefit analysis in order to reach an efficient outcome); *see also infra* notes 380–83 and accompanying text.

as property (the province of the state and the market)?[17] Should that artifact's possible future obsolescence lead to indifference?[18] Can an artifact be a global resource when it has a national history of creation?[19] Should the artifact be privatized or held in the commons?[20] If it is to be privatized, how should we allocate the initial entitlements?[21] Should it be treated as *res nullius*,[22] subject to acquisition by the first claimant?[23] Can the Lockean, utilitarian, or personhood visions of private property guide us?[24] The astonishing fact is that these questions are in fact being answered, but only *sub rosa*. The property law of this new century will face these questions frequently in domains as diverse as communications standards, orbital locations, genetic research, and intellectual property.[25]

Two centuries ago, the young American republic faced similar questions with respect to conflicting claims to the nation's lands. The early efforts to resolve the philosophical conflicts form part of our property law canon. In famous and infamous cases such as Johnson *v. M'Intosh*,[26] the courts helped establish the principles governing the distribution of entitlements to property. And again, as humankind ventured across ever new frontiers, international law sought to grapple with the allocation of property rights in areas such as the deep seabed, Antarctica, and outer space. Drawing upon philosophy, economic theory, American history, and international law, this Article seeks to do the same with respect to the new frontier of cyberspace. Based on a study of these diverse disciplines, the Article seeks to offer the underpinnings of a just national and international domain name regime.

One of the virtues of a constructed world is that the rules[27] can be written anew. My suggestion is that we avoid the mistakes of the past by focusing on equality now, rather than reform and possibly reparations later. Cyberspace is yet new, and it carries the optimism of all beginnings. We

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17. *See infra* subpart VI(A).

18. *See infra* subpart VI(C).

19. *See infra* subpart III(B).

20. *See infra* subpart VI(B).

21. *See infra* Part V.

22. *Cf.* IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 176–77 (4th ed. 1990) (describing *terra nullius* as land "open to acquisition by any state").

23. *See infra* subpart II(A).

24. *See infra* subpart II(B).

25. *See, e.g.*, Bruce A. Ackerman & Donald Elliot, *Air Pollution "Rights"*, N.Y. TIMES, Sept. 11, 1982, at 23 (arguing that free distribution of emission reduction credits to corporate polluters represents an unjustified giveaway of a public resource); International Telecommunications Users Group, *Users welcome the new 388 code for Europe*, Apr. 18, 2000, http://www.intug.net/press/388.html (describing the creation of a single new telephone country code covering all of Europe).

26. 21 U.S. (8 Wheat.) 543, 573 (1823).

27. These rules might be in the form of law, the market, computer architecture, or norms. *See* LESSIG, CODE, *supra* note 13, at 85–99.

must meet its promise by striving to write rules for cyberspace that better our condition in real space.

I. Replicating Inequality in Cyberspace

As Carol Rose has told us, the narrative we tell of property is crucial.[28] Offering a "moral" tale,[29] the story of the origins of property and its current distribution can serve either to ratify or undermine a property rights regime. The narrative I relate here seeks the latter goal. The retelling of this history shows that while domain names developed a significance far beyond their original design, the system for allocating domain names did not adapt to reflect the change in their value.

The familiar domain name narrative begins with a new world of cyberspace much like Locke's vision of the America of his day[30]—a virgin state of nature characterized by plenty. Here, the narrative diverges into those who believe that the early occupants of this space were greedy squatters seeking to extort trademark holders[31] and those who see small entrepreneurs who quickly settled cyberspace creating a rich, bountiful, and diverse Internet despite aggressive efforts by trademark holders to monopolize the Internet.[32] Note that both versions of the narrative focus on the interests of domain name claimants and trademark holders. In either telling, the story elides people who do not have Internet access or who surf but hold neither a domain name nor a trademark.

An alternative, and more incisive, story would begin with engineers looking to respond to a simple human frailty: the inability to remember long strings of numbers. The clever solution, offered ultimately in the form of a domain name system, makes possible an ever increasing number of computers on the network of networks known as the Internet. As the world develops, however, and cyberspace is called into being by the efforts of

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28. Carol M. Rose, *Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory*, 2 YALE J.L. & HUMAN. 37, 38–39 (1990) (arguing that the narratives regarding property offered by theorists such as Locke and Blackstone affect views about property rights regimes).

29. *Id*. at 39.

30. JOHN LOCKE, TREATISE OF CIVIL GOVERNMENT AND A LETTER CONCERNING TOLERATION 32 (Charles L. Sherman ed., 1937) (1689) (stating that "in the beginning all the world was America"); *id*. at 27 (observing that America is "rich in land").

31. Faye Fiore, *'Cyber-Pirates' Targeted by Capital Compromise*, L.A. TIMES, Oct. 26, 1999, at A4 (describing the practice of registering domain names using names of famous entertainers as "extortion"); David Greising, *Squatter Rules a Must For Names' Sake*, CHI. TRIB., Jan. 23, 2000, § 5, at 1 ("There's something really wrong . . . about grabbing an individual's name and holding it for ransom."); Cosmo Macero Jr., *Meehan Camp Battles Cyber-Squatters*, BOSTON HERALD, Jan. 21, 2000, at 1 ("I really think it's stealing your birthright . . . .").

32. *See, e.g.*, Press Release, Domain Name Rights Coalition, "Cybersquatting" Bill Could Harm Free Speech (June 28, 1999), *at* http://www.netpolicy.com/Cybersquatting.html (arguing that a bill that criminalizes the use of domain names that are also trademarked would impinge on free speech and protect big business at the expense of the consumers and small businesses).

millions of individuals worldwide, the domain name planners continue to view domain name allocation as a ministerial task, feigning ignorance of the nature of the work they are doing.[33]

The central antagonism in this new narrative is not between cybersquatters and trademark holders (as in the familiar story), but between the domain name haves and have-nots. The new narrative displaces from centerstage the contest between trademark holders and cybersquatters, a conflict that has served only to distract us from the real story. My alternative narrative would recognize the domain name race as a vehicle for distributing wealth in the form of the new assets of the Information Age.[34]

A. First-Come, First-Served

If there is to be a hero in any Internet story, it may well be Tim Berners-Lee,[35] the British mathematician who put a lie to the claim that monetary reward is the primary engine of invention.[36] Berners-Lee, along with others at the European laboratory known as CERN, developed a system for sharing information that he named the "World Wide Web."[37] The democratic vision of the Web, where individual users become content producers and link to information across the world freely,[38] contrasted sharply with the proprietary

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33. *See infra* notes 323–24 and accompanying text.

34. I do not attempt here any comprehensive description of either the history or workings of the domain name system, as others have already capably done so. *See, e.g.*, Joseph P. Liu, *Legitimacy and Authority in Internet Coordination: A Domain Name Case Study*, 74 IND. L.J. 587 (1999) (arguing that past proposals to reform domain name allocation failed because they did not appreciate the fact that domain name problems are primarily a matter of public policy, not technology); Jonathan Zittrain, *ICANN: Between the Public and the Private*, 14 BERKELEY TECH. L.J. 1071, 1077–79 (1999) (describing the rough consensus-based process used to develop Internet standards); Milton Mueller, *ICANN and Internet Governance: Sorting Through the Debris of "Self-Regulation"*, 1 INFO 497 (1999) (analyzing the informal, non-traditional development and functioning of the domain name system); Jessica Litman, *The DNS Wars: Trademarks and the Internet Domain Name System*, 4 J. SMALL & EMERGING BUS. L. 149 (2000) (studying the conflict between domain name registration policy and trademarks).

35. *See* JANET ABBATE, INVENTING THE INTERNET 214–15 (1999) (describing Berners-Lee's goals and methods in developing the World Wide Web).

36. For Netizens, there is another character of heroic proportions, Jon Postel, who helped design the domain name system and personally managed part of it in its early years. *See* Zittrain, *supra* note 34, at 1077 (noting that, for many, Postel was "a Solomonesque figure who applied an engineering talent to the various issues that came up, thought hard, and simply did the right thing to keep the process running smoothly"). Postel passed away in October 1998. *See* Vinton G. Cerf, *I Remember IANA*, Request for Comments #2468 (Oct. 1998), *at* www.rfc-editor.org (memorializing Jon Postel and noting that he served as the first editor of the Request for Comments series and as custodian of the .us top level domain).

37. Tim Berners-Lee, *The World Wide Web: A very short personal history*, *available at* http://www.w3.org/People/Berners-Lee/ShortHistory.html (last visited Oct. 18, 2002) (describing the inventor's "dream" of "a common information space in which we communicate by sharing information").

38. *See* Anupam Chander, *Whose Republic?*, 69 U. CHI. L. REV. 1479, 1490–91 (2002) (arguing that widespread participation is one of the guiding principles of Internet design).

commercial networks existing at the time,[39] which connected users to large, centralized databases of information.[40] With the advent of the Web, the Internet now "took on new roles as an entertainment medium, a shop window, and a vehicle for presenting one's persona to the world."[41]

With this revolutionary application of the Internet, the "land rush" for domain names was on.[42] Domain names now developed a new cultural and economic significance. Rather than identifying MIT to UCLA, or one defense department agency to another,[43] domain names now began to serve as ways for everyday consumers to interact with each other and with commercial enterprises.[44] By that time, day-to-day management of domain names had been transferred to Network Solutions, Inc. (NSI), a private company in Herndon, Virginia.[45] From the beginning, NSI handed out domain names on a first-come, first-served basis. Early on, it even handed them out for free.[46] In 1995, NSI began charging for each name, $100 for the first two

39. Prominent American examples of early commercial networks for home users include CompuServe, Prodigy, and America Online.

40. In this way, the World Wide Web fully realized the "end-to-end" principle imbedded in the Internet, where intelligence and control were distributed throughout the network rather than centralized in a few nodes. *See* Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001) (objecting to centralized control as undermining the innovation that flourishes under the Internet's traditional design); Timothy Wu, *Application-Centered Internet Analysis*, 85 VA. L. REV. 1163, 1192–93 (1999) (cataloging the benefits of the Internet's end-to-end design).

41. ABBATE, *supra* note 35, at 214.

42. *See, e.g.*, *Private Company to Charge $50 for Internet Domains*, L.A. TIMES, Sept. 14, 1995, at D2 (describing difficulties in funding domain-name cataloging due to the exponential increase in new sites); *Fall Computer Trends*, SEATTLE TIMES, Sept. 17, 1995, at C1 (discussing the multi-site registration trend, in which companies typically register up to 150 domain names); *see also* Joshua Quittner, *Billions Registered*, WIRED, Oct. 1994, http://www.wired.com/wired/archive/2.10/mcdonalds.html (describing the "Net Name Gold Rush" and asking, "Is there gold in them thar domains, as a lot of people seem to think, or is it fool's gold?").

43. *See* National Science Foundation, Fact Sheet: NSF and Domain Names, *at* http://www.nsf.gov/od/lpa/news/media/fs80226a.htm (last visited Dec. 4, 2002) ("By the early 1990s, most of the new registrations on the Internet were by academic institutions.").

44. *See* Zittrain, *supra* note 34, at 1075–76 (comparing domain names to public streets, which take us to locations where we can interact with each other and with commercial entities).

45. Management was transferred first to the Information Sciences Institute at the University of Southern California in 1985, and then to Network Solutions, Inc. on January 1, 1993, pursuant to a cooperative agreement with the National Science Foundation. *See* Annual Report, Form 10-K, Verisign (2001), *available at* http://www.sec.gov/Archives/edgar/data/1014473/000101287002002292/d10k.txt (last visited Oct. 15, 2002) (detailing the cooperative agreement which Network Solutions, Inc., a wholly owned subsidiary of Verisign, entered into with the National Science Foundation providing that Network Solutions, Inc., would perform registration services for top level domains); Name.Space, Inc. v. Network Solutions, Inc., 202 F.3d 573, 577 (2d Cir. 2000) (rejecting an argument that NSI's control over the domain name system was a violation of antitrust laws).

46. Rosalind Resnick, *Paying a Toll on the Information Superhighway*, CHI. TRIB., Oct. 9, 1995, at 3 (noting that the U.S. government had paid for the cost of registrations until September 1995).

years, and $50 annually thereafter.[47] The introduction of fees did not abate the rush.[48]

President Bill Clinton and Vice President Al Gore entered the domain name policy debate in 1997, releasing a policy statement entitled "A Framework for Global Electronic Commerce."[49] In this statement, the Clinton Administration declared support for private governance of domain names.[50] The following year, the Department of Commerce chartered ICANN, a new, not-for-profit California corporation, to help design and develop a privately governed domain name system.[51] With this somewhat ambiguous mandate from the U.S. Government, this fledgling private body with public aspirations[52] became the world's policy-making body in the field of domain names, controlling the important questions of what top level domains would be permitted,[53] which companies could sell domain name registrations,[54] and how domain name disputes would be resolved.[55]

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47. *Id.*

48. National Science Foundation, Fact Sheet: NSF and Domain Names, *at* http://www.nsf.gov/od/lpa/news/media/fs80226a.htm (last visited Dec. 4, 2002) ("In September, 1995, at the initiation of fees, there were approximately 120,000 [domain names]. By January, 1998, 1.7 million domain names were registered.").

49. William J. Clinton & Albert Gore, Jr., *Framework for Global Electronic Commerce* (July 1, 1997), *available at* http://www.ecommerce.gov/framewrk.htm.

50. *Id.* at 11 (declaring support for "private efforts to address Internet governance issues including those related to domain names"). The "privatization" of domain name policy-making was part of the Clinton Administration's general policy of privatizing the Internet. *See* Jay P. Kesan & Rajiv C. Shah, *Fool Us Once Shame on You—Fool Us Twice Shame on Us: What We Can Learn from the Privatizations of the Internet Backbone Network and the Domain Name System*, 79 WASH. U. L.Q. 89, 111–19, 167–88 (2001) (describing privatizations of the Internet network backbone and domain name governance).

51. ICANN (the Internet Corporation for Assigned Numbers and Names) is the entity charged by the Commerce Department with the management of the domain name system. *See* Memorandum of Understanding Between the U.S. Department of Commerce and Internet Corporation for Assigned Names and Numbers § II.B (Nov. 25, 1998), *available at* http://www.icann.org/general/icann-mou-25nov98.htm [hereinafter Memorandum of Understanding] (defining ICANN's role in the domain name system project); Zittrain, *supra* note 34, at 1082 (summarizing the transfer of authority in domain name matters to ICANN).

52. Whether ICANN is a state actor bound by the U.S. Constitution and administrative rules remains an unsettled question, though complaints against ICANN's predecessor, Network Solutions, have generally failed to pass the state action bar. *See* Nat'l A-1 Adver., Inc. v. Network Solutions, Inc., 121 F. Supp. 2d 156, 169 (D.N.H. 2000) (holding that "Network Solutions was not a government actor when it denied plaintiffs' applications for second-level domain names"); Island Online, Inc. v. Network Solutions, Inc., 119 F. Supp. 2d 289, 303–07 (E.D.N.Y. 2000) (holding that Network Solutions could not be sued for the deprivation of the right to free speech because it was not a state actor).

53. *See* Memorandum of Understanding, *supra* note 51, § III.B.iii.

54. *See infra* note 63 and accompanying text.

55. ICANN denies that it has any such authority on the ground that the Department of Commerce retains final oversight authority over changes to the domain name system. *See* Declaration of Louis Touton, ICANN General Counsel, Economic Solutions, Inc. v. Internet Corporation for Assigned Names and Numbers, No. 4:00CV1785-DJS (E.D. Mo. Nov. 11, 2000), *available at* http://www.geocities.com/gooda14/icann/Touton.htm (denying that ICANN has legal authority over top level domain names); Economic Solutions, Inc. v. Internet Corporation for

Meanwhile, the press concentrated on often outrageous cases of "cybersquatting," where a registrant would claim a domain name consisting of another company's trademark.[56] The concerns of trademark holders did not go unheeded by ICANN. In 1999, it adopted a Uniform Dispute Resolution Policy (the "UDRP") proposed by the World Intellectual Property Organization, a United Nations body based in Geneva.[57] Spurred by trademark interests, Congress also acted simultaneously, passing the Anti-Cybersquatting Consumer Protection Act (ACPA).[58] Both sets of rules allowed a trademark holder to contest the registration of a domain name using her trademark upon a showing of the registrant's "bad faith."[59] The possibility of subsequent transfer to a trademark owner intruded upon the clear regime of first possession, allowing the trademark owner to wrest the domain name from its initial registrant or subsequent owner because of supposed misuse. This might be characterized as a sort of "trademark

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Assigned Names and Numbers, No. 4:00CV1785-DJS (E.D. Mo. Nov. 11, 2000), *available at* http://www.icann.org/tlds/correspondence/esi-v-icann-13nov00.htm (concluding that "ICANN . . . has no authority to implement new TLDs . . . [because] it merely makes recommendations to the Commerce Department, which retains the ultimate authority to make such decisions").

56. *See* Greg Hassell, *Microsoft Names Two Texans in youarebeingsued.com*, HOUSTON CHRON., Dec. 31, 1998, at 1 (discussing a suit brought by Microsoft against two individuals who registered www.microsoftwindows.com and www.microsoftoffice.com and the "huge problem" of cybersquatting); Julia Angwin, *Net Addresses Sold Like Real Estate: Cybersquatters Stake Claim on Famous Names, Seek Sale*, S.F. CHRON., May 6, 1997, at A1 (discussing cybersquatters who register famous domain names in order to sell them for huge profits and the efforts that are being made to squelch the practice); Greg Miller, *Internet Addresses Fueling Rash of Territorial Disputes Business: Big Firms Increasingly Find Others Have Taken Their Names*, L.A. TIMES, July 16, 1996, at A1 (describing the "hundreds of disputes over Internet domain names involving giant companies" who find their proprietary names already registered by someone else).

57. Internet Corporation for Assigned Names and Numbers, Uniform Domain Name Dispute Resolution Policy, *at* http://www.icann.org/udrp/udrp-policy-24oct99.htm (Oct. 24, 1999) [hereinafter ICANN UDRP]; Luke A. Walker, *ICANN's Uniform Domain Name Dispute Resolution Policy*, 15 BERKELEY TECH. L.J. 289, 298–99 (2000) (noting that ICANN adapted its policy from a World Intellectual Property Organization proposal).

58. Anticybersquatting Consumer Protection Act § 3002(a), 113 Stat. 1536, 1501A-545 (1999) (codified at 15 U.S.C. § 1125(d)(2) (2002)).

59. 15 U.S.C. § 1125 (d)(1)(A)(i), (B); ICANN UDRP, *supra* note 57, at 4(a)(iii); *see also* Robert A. Badgley, *Internet Domain Names and ICANN Arbitration: The Emerging "Law" of Domain Name Custody Disputes*, 5 TEX. REV. L. & POL. 343 (2001) (discussing the bad faith requirement of ICANN's Uniform Dispute Resolution Policy); Michael Geist, *Fair.com?: An Examination of the Allegations of Systematic Unfairness in the ICANN UDRP*, 27 BROOK. J. INT'L L. 903 (2002) (noting that ICANN's Uniform Dispute Resolution Policy encourages forum shopping and may therefore be biased in favor of trademark holders); P. Wayne Hale, *The Anticybersquatting Consumer Protection Act &* Sporty's Farm L.L.C. v. Sportsman's Market, Inc., 16 BERKELEY TECH. L.J. 205, 216–17 (2001) (discussing the bad faith requirement of the Anticybersquatting Consumer Protection Act); Donna L. Howard, *Trademarks and Service Marks and Internet Domain Names: Giving ICANN Deference*, 33 ARIZ. ST. L.J. 637 (2001) (discussing the bad faith requirements of both the Anticybersquatting Consumer Protection Act and ICANN's Uniform Dispute Resolution Policy); David E. Sorkin, *Judicial Review of ICANN Domain Name Dispute Decisions*, 18 SANTA CLARA COMPUTER & HIGH TECH. L.J. 35 (2001) (contrasting the bad faith requirements of the Anticybersquatting Consumer Protection Act and ICANN's Uniform Dispute Resolution Policy).

preemption."[60] But this deviation from the first possession rule is limited to the small fraction of domain names that use trademarks in bad faith.

Having responded to trademark holders through the trademark dispute resolution policy, ICANN also sought to appease domain name holders, who were exasperated with Network Solutions' monopoly on domain name registrations.[61] Domain name holders hoped that competition would make it cheaper and easier to buy more names.[62] ICANN introduced competition in 1999 by authorizing ("accrediting") new companies (known as "registrars") to sell domain name registrations.[63] In 2000 and 2001, ICANN responded again to domain name holders, who sought the expansion of the domain name space to include new Top Level Domains ("TLDs") such as .info, .biz, and .name.[64] In a clear example of rent-seeking,[65] these domain name holders successfully fought for the release of additional cyberspace resources that they might exploit.

B. Haves and Have Nots

Begin with the fact that Network Solutions, Inc., the Herndon, Virginia company selected by the National Science Foundation to manage the domain name system, was acquired in the year 2000 for $21 billion in stock.[66] Consider also the fact that some of the domain names themselves have proven to be valuable assets because they might serve as ideal names for commercial websites.[67] For example, Procter & Gamble offered to sell

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60. *See infra* note 260 and accompanying text (describing the historical practice of awarding settlers the right to preemption of claims to land).

61. Domain name holders may receive their own representation on the ICANN board if a draft proposal of an ICANN-authorized study group is implemented. Letter of the ICANN At-Large Membership Study Committee to the ICANN Board and Community (Aug. 27, 2001), *at* http://www.atlargestudy.org/draft_final.shtml.

62. *See* Ed Foster, *Fe Fi Fo Fum: ISPs, DNS registrants Suffer at the Hands of the NSI Giant*, INFOWORLD, Mar. 8, 1999, at 101 (noting that the "basic complaint about NSI continues to be that the company's lack of competition allows it to get away with poor service to [domain name] registrants"); Mike France, *What's in a Name.Com? Plenty*, BUS. WK., Sept. 6, 1999, at 86, 88 (noting that by "breaking up" Network Solutions' monopoly, ICANN hopes "to cut down the $35 annual fee for domain names").

63. ICANN, Registrar Accreditation Agreement, *at* http://www.icann.org/nsi/icann-raa-04nov99.htm (last visited Sept. 28, 2002); Jeri Clausing, *Criteria Are Set for Applicants To Join Internet Name Registry*, N.Y. TIMES, Mar. 8, 1999, at C6 ("Accreditation guidelines called for applicants to have $100,000 in liquid capital, $500,000 in liability insurance, a proven computer infrastructure and at least five employees.").

64. *See* Christine Frey, *Newest Suffixes Help to Increase Net's Population*, L.A. TIMES, Feb. 11, 2002, at C7 (reporting large numbers of registrations upon the opening of .info and .biz domains).

65. This is a predictable consequence of any property rights system. *See* William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 267 (1987) (noting that one "major cost of a property rights system is rent seeking to obtain a property right").

66. Kalish, *supra* note 4.

67. Julia Angwin, *San Jose Man Hits Gold—$3.3 Million Web Name*, S.F. CHRON., July 18, 1998, at A1 ("Compaq Computer Corp. has agreed to pay a San Jose man $3.35 million for the Web

Beautiful.com for $3 million.[68] In the case of *Kremen v. Cohen*, a federal judge valued the use of Sex.com over the previous five years at $65 million.[69] The firm MicroStrategy spent millions of dollars investing in web addresses, buying heroic words like "glory," "hope," "courage," and "wisdom."[70] VirtualCountries, a Washington firm, owns, among many other prominent country names, SouthAfrica.com and Russia.com.[71] What major geographical names this company does not have, Mail.com, a Delaware firm, likely owns.[72] Some companies own hundreds of thousands of domain names.[73] The fact that almost all of these domain-name holders are American is no coincidence: United States residents hold more than forty percent of all the .com, .net, and .org domain names in the world.[74]

While some individuals hope to profit by selling the domain names, others reserve domain names with the plan to build a website there later. In either case, the distribution of domain names will have a significant impact on the ability of people to compete commercially in the future.[75] The person

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address www.altavista.com."); *GreatDomains.com Auctions Cinema.com for $700,000*, BIZREPORT, Mar. 13, 2000, http://www.bizreport.com/news/2000/03/20000313-2.htm; *Loans.com Web Address Auctioned for $3 Million*, WALL ST. J., Jan. 31, 2000, at B6; Pollack, *supra* note 3 (reporting that business.com sold for $7.5 million); Robbie Sherwood, *Drugs.com Domain Name Is Worth $823,456*, ARIZ. REPUBLIC, Aug. 7, 1999, at B1 (noting that the sale made its 21-year-old seller "financially healthier than he was three months ago when he acquired the name"); *Thrunet Buys Domain Korea.com for $5 Million*, KOREA TIMES, Jan. 21, 2000 (noting that a Korean company purchased Korea.com from a Korean-American who purchased the name in 1995 for $70); Nick Wingfield, *The Game of the Name: Thinking Up the Perfect Address is Crucial; Just Hope Nobody Else Owns It*, WALL ST. J., Nov. 11, 1999, at R14 (reporting that Bingo.com sold for $1.1 million and University.com sold for $530,000).

68. Frank Barnako, *P&G Asks $3mln for Beautiful.com*, CBS.MarketWatch.com, Dec. 19, 2000, *at* http://cbs.marketwatch.com/news (noting that the company was offering to sell more than 100 domain names).

69. Regan, *supra* note 8; *see also* Kremen v. Cohen, No. 01-15899, slip op. at 39 (9th Cir. Jan. 3, 2003).

70. David S. Hilzenrath, *MicroStrategy's Many Domains; Saylor Firm Spent Millions Investing in Web Addresses*, WASH. POST, Apr. 10, 2001, at E1 ("In pursuit of glory, it helps to have hope, courage and wisdom. MicroStrategy Inc. didn't just believe in those words—it bought them.").

71. Markoff, *supra* note 5 (reporting that VirtualCountries has registered SouthAfrica.com as well as 30 other country names).

72. Richard Teitelbaum, *Cashing in on Geography*, N.Y. TIMES, July 25, 1999, § 3, at 4 (describing Mail.com's ownership of "beachfront properties" such as Asia.com, USA.com, Europe.com, and India.com). An Oklahoma company owns Philippines.com as well as Iceland.com.

73. *See* Matthew Zook, Top Domain Name Holders, *at* http://www.zooknic.com/Domains/index.html (last visited Oct. 16, 2002) (listing the five top domain name holders, four of whom are American and one of whom is European).

74. *See* Matthew Zook, Domain Name Geography, *at* http://www.zooknic.com/Domains/index.html (last visited Oct. 16, 2002) (stating that of all the gTLDs (.com, .net, and .org) and ccTLDs (country code top level domains) in the world, 42.4% were registered to people in the United States (as of July 2002)).

75. Xuan-Thao N. Nguyen, *Shifting the Paradigm in E-Commerce: Move Over Inherently Distinctive Trademarks—The E-Brand, I-Brand and Generic Domain Names Ascending to Power?*,

who owns Law.info has a natural advantage as a legal information provider. While competitors will need to spend large amounts of money for brand name recognition, the obvious character of Law.info's name will reduce its need to advertise. To borrow an analogy from real space, it is the difference between having a shop on Main Street or on a side street.[76] Today's domain name system reaches not only quite far in time, but also in distance. As the earlier examples show, people routinely register domain names dealing with faraway places, cultures, and events, hoping someday to exploit these names commercially. We are witnessing the creation of a cyberspace where most of the major commercial venues and most of the major domain name services will be provided by companies in the richer parts of the world. Selling their goods and services through cyberspace, the global corporations of tomorrow, like the global corporations of today, will be largely based in the richer countries of the world. Thus, we see that the focus on cybersquatting of trademarks obscures the significant long-term wealth effects underlying the domain name system.[77]

Moreover, the power to allocate domain names is itself valuable, as the Network Solutions example amply demonstrates.[78] One of Network Solutions' biggest competitors, Register.com, reported over $43 million in gross profits on net revenues of approximately $60 million in the first half of 2001 alone.[79] Any worldwide entity wishing to register a domain name in the .com, .net, or .org spaces has to pay an accredited registrar its fee to add the name to the central database of domain names. Who receives this valuable charter? To date, the vast majority (97%) of the registrars accredited by ICANN for the .com, .net, and .org TLDs have come from high-income countries, while far fewer hail from middle-income nations and low-income

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50 AM. U. L. REV. 937, 976 (2001) (describing the competitive advantage of holders of generic domain names).

76. One scholar describes domain names as "akin to real estate where location.location.location is the key to value." Kenton K. Yee, *Location.Location.Location: Internet Addresses as Evolving Property*, 6 S. CAL. INTERDISC. L.J. 201, 221 (1997). *See also* Andy Sullivan, *ICANN Moves to Protect ".info" Country Names*, CNET NEWS.COM, Sept. 10, 2001, *at* http://news.cnet.com/investor/news/newsitem/0-9900-1028-7120006-0.html?tag=ats ("Generic names like 'finance.info' . . . have been prime targets for cybersquatters, who snatch up domain names with the hopes of reselling them later for a high fee.").

77. *See* Peter B. Maggs, *The '.US' Internet Domain*, 50 AM. J. COMP. L. 297, 316 (2002) (concluding that the privatization of '.us' amounts to the giveaway of the public domain "free of charge").

78. *See supra* note 66 and accompanying text. Network Solutions, which now does business under Verisign's name, recognizes the possibility of what it calls "premium pricing" for domain names, and it proposes to resell expired domain names for a high price. *Virginia Senator, Backing Verisign, Says ICANN Is Straying Outside Technical Mission*, 7 ELECTRONIC COM. & L. REP. 791, 792 (2002).

79. Register.com, Inc. Financial Reports, http://media.corporate-ir.net/media_files/NSD/rcom/reports/rcom_2001q2.pdf; *see also* Julia Angwin, *Latest Dot-Com Fad Is a Bit Old-Fashioned: It's Called 'Profitability'*, WALL ST. J., Aug. 14, 2001, at A1 (including Register.com in a list of dot-com companies reporting a profit).

nations (2% and 1%, respectively), as shown in Table 1 below. None at all come from Africa or South America.

TABLE 1[80]
DISTRIBUTION OF ICANN-ACCREDITED REGISTRARS FOR .COM, .NET, AND .ORG BY INCOME OF HOME COUNTRY

Country Income	ACCREDITED REGISTRARS
High Income	103
Middle Income	2
Low Income	1

TABLE 2
DISTRIBUTION OF ICANN-ACCREDITED REGISTRARS FOR .COM, .NET, AND .ORG BY CONTINENT

Continent	ACCREDITED REGISTRARS
Africa	0
Asia (incl. Mideast)	16
Australia	4
Europe	35
North America	54
South America	0

ICANN seems unconcerned with these disparities.[81] In 2000, ICANN solicited applications to manage new TLDs, demanding a fee of $50,000 from each applicant. Given the high entry fee, it is not surprising that the vast bulk of the applications came from high income countries, as Table 3 shows, and none from Africa or South America.[82]

80. The statistics in these tables are current as of November 20, 2002. The tables are derived from data provided at www.icann.org. The classification of a country into high, middle, and low income follows that used by the World Bank.

81. Compare, for example, the original 1997 plan to add new TLDs proposed by the International Ad Hoc Committee, an authoritative group chaired by a representative of the Internet Society and including representatives from various world networking organizations. *See* Catherine Sansum Kirkman, *Doing Justice to the Web: The Domain-Name Monopoly Game*, WEBTECHNIQUES, May 1997, http://webtechniques.com/archives/1997/05/just. That proposal would have awarded the charter to manage the new TLDs to registrars in each of seven regions in the world, ensuring, for example, that there would be African and South American registrars. *Id*.

82. Even though its sponsoring members are American and European, the registry for .museum is listed under North America because the company that manages the registry is a Delaware not-for-profit corporation. *See* http://www.musedoma.org/corporate_info.html (last visited Sept. 28, 2002).

TABLE 3
DISTRIBUTION OF NEW TLD APPLICANTS & WINNERS
BY HOME COUNTRY INCOME

Country Income	TLD APPLICANTS	TLD WINNERS
High Income	57	7
Middle Income	4	0
Low Income	3	0

TABLE 4
DISTRIBUTION OF NEW TLD APPLICANTS & WINNERS
BY CONTINENT

Continent	TLD APPLICANTS	TLD WINNERS
Africa	0	0
Asia (incl. Mideast)	9	0
Australia	1	0
Europe	13	3
North America	41	4
South America	0	0

All of the seven winners of the right to manage the domain name registration process for such new TLDs as .biz, .info, .name, and .pro came from high income nations in North America or Europe.[83] The lopsided distribution continues even a level further: the new registrars appointed by these managers for the .info, .biz, and .name spaces are again principally from high income North American and European countries.[84]

TABLE 5
DISTRIBUTION OF REGISTRARS FOR NEW TLDS
BY INCOME OF HOME COUNTRY

Country Income	.INFO (Afilias)	.BIZ (NeuLevel)	.NAME (Global Name Registry)
High Income	102	71	28
Middle Income	3	3	1
Low Income	1	1	0

83. *See supra* note 82. Although Afilias, an Irish company, was formed as a venture of eighteen companies worldwide, the large majority of its sponsors are American or European, with just one each from India, Israel, and Singapore, and two from Japan. *See* http://www.nic.info/about_afilias/bin/shareholder-list.cgi (last visited Sept. 28, 2002).

84. The data in this table and the one following are derived from information provided at nic.biz, nic.name, and icann.org.

TABLE 6
DISTRIBUTION OF REGISTRARS FOR NEW TLDS
BY CONTINENT

Continent	.INFO (Afilias)	.BIZ (NeuLevel)	.NAME (Global Name Registry)
Africa	0	0	0
Asia (incl. Mideast)	13	13	4
Australia	4	2	1
Europe	28	21	11
North America	61	47	12
South America	0	0	0

These are not the only effects of the domain name system, as the example of the Yanomami Indians in Brazil shows. While the technology of the Yanomami may be Neolithic, they are not indifferent to cyberspace. When Chief Kopenawa learned that a Florida woman was offering up Yanomami.com for sale for $25,000, he protested.[85] But the Floridian replied that if the Yanomami wanted the name, they would have to buy it from her.[86]

In this story, we see that the domain name policy makers remain entirely disinterested in the economic and cultural consequences of their efforts (aside from the well-discussed problem of extortion based on trademark squatting). The end result is a domain name system that rewards a few with economic rents, granting them privileged positions from which to engage in commerce. Moreover, because of ICANN's lack of attention to the value of the charter it grants through its registrar accreditation process, the system gives the precious right to sell domain names to registrars that come principally from the richest parts of the world.

In sum, the upshot of the studied ignorance of the real-world economic and cultural effects is the continuance of a domain name system that replicates real-space inequality in cyberspace. But why should either Kremen or Cohen have the right to Sex.com?[87] Does Procter & Gamble have a special claim to Beautiful.com?[88] Before we can reject the system for its distri-

85. Baldwin, *supra* note 10 (noting that "the Yanomami, one of the world's true Neolithic peoples, wants to reclaim the Web address ahead of the day it swaps its bows and arrows for cybertools").

86. *Id*. (quoting the Florida owner of the domain name as saying, "If [the Yanomami] are thinking of making money on the Internet, then I don't see why they cannot pay for the name.").

87. *See* Kremen v. Cohen, No. 01-15899 (9th Cir. Jan. 3, 2003) (adjudicating a dispute between two individuals, each of whom claimed to be the rightful owner of Sex.com).

88. *See* Barnako, *supra* note 68 (noting the company's offer to sell Beautiful.com for $3 million).

butional inequity, however, we must consider whether the first possession rule is otherwise defensible. The next Part turns to this question.

II. First Possession, Flawed Principles

"If I pour my can of tomato juice into the ocean, do I own the ocean?"[89] With this rhetorical question, Nozick presses Locke's labor theory of property. Remarkably, our current system of allocating property rights in domain names suffers from exactly this nonsensical effect. A trivial amount of effort can render one the owner of a very valuable domain name. The problem lies in the underlying property rule of first possession, a rule that gives the first claimant the property regardless of its value.

A. The Emptiness of First Possession

First possession is less a theoretical justification for the distribution of private property than an assertion of power. The rule of first possession, where "you take what you can get,"[90] would award the initial entitlement in property to the first person who possesses it.

1. A Merely Formal Equality.—First possession appears initially to be a paragon of fairness—anyone can enter the race for the spoils. And, indeed, many will argue that the current domain name system evinces a strongly egalitarian streak. Anyone the world over can register a domain name, regardless of color, sex, sexual orientation, creed, or physical ability. Moreover, the person need not even be rich since domain names can be obtained for as little as $15 a year. The current system's proponents will argue that it allows quick-witted, small entrepreneurs to grab a domain name before large corporations.

But it quickly becomes clear that this is an empty equality. As feminist and race theorists have pointed out, mere *formal* equality does not translate into substantive equality.[91] In fact, first possession works strictly to the advantage of those best positioned to win the race—those who have the capital and the technology to lay a claim, those who know the rules of the

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89. This is William Fisher's phrasing of Robert Nozick's famous question. William Fisher, *Theories of Intellectual Property*, *in* STEPHEN MUNZER, NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 168, 188 (2001); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 175 (1974) ("If I own a can of tomato juice and spill it into the sea so that its molecules mingle . . . evenly throughout the sea, do I thereby come to own the sea . . . ?").

90. RICHARD A. EPSTEIN, SIMPLE RULES FOR A COMPLEX WORLD 59 (1995) [hereinafter EPSTEIN, SIMPLE RULES].

91. *See* Catharine A. MacKinnon, *Difference and Dominance: On Sex Discrimination*, *in* FEMINIST LEGAL THEORY: READINGS IN LAW AND GENDER 81, 81–82 (Katharine Bartlett & Rosanne Kennedy eds., 1991) (critiquing formal equality because it treats women as "the same as" men without respect for power differences); Katharine T. Bartlett, *Gender Law*, 1 DUKE J. GENDER L. & POL'Y 1 (1994) (distinguishing formal from substantive visions of equality in gender law).

race, and those who even know that the race is being run at all.[92] Even though a system might appear on its face to be neutral, real-world differences in socioeconomic circumstances, power, and education may lead to widely divergent experiences. A formally equal system may in fact play into the hands of some at the expense of others.[93]

2. Distributional Equity.—This prediction is borne out with respect to domain names. Forty percent of .com domain names are owned by Americans.[94] The anecdotal cases of the Yanomami, South Africa, and Kumbh Mela reveal that even names associated with the Third World have been captured by Americans. The first possession regime has greatly benefited a few—those technologically inclined (even if minimally so), with access to the Internet, and with a minimal knowledge of cyberspace rules. While these individuals need not be rich by the standards of the developed world, they do indeed need to be rich by the standards of the developing world, where the $15 minimum annual fee might be five percent of the average annual income.[95] Formal equality ignores, for example, the fact that an individual who wants to purchase a domain name will likely need a credit card, a disqualifying requirement for much of the world.[96] The domain name regime's preference for trademark holders deepens the bias. Trademarks are, of course, far more pervasive in Western market economies than in other parts of the world.[97]

The grant of a domain name often awards a windfall[98] of profits to the recipient, as the value of the name often far exceeds the price paid for it.[99]

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92. GUIDO CALABRESI & PHILIP BOBBITT, TRAGIC CHOICES 43 (1978) (observing that a first-come, first-served method may be "deeply inegalitarian if usable knowledge of the availability of the resource is unevenly distributed within the eligible group, particularly if the uneven distribution is linked to social or economic attributes").

93. *See, e.g.*, Amy Chua, *Markets, Democracy, and Ethnicity: Toward a New Paradigm for Law and Development*, 108 YALE L.J. 1 (1998) (arguing that markets may in some instances favor certain ethnic groups who are best equipped to take advantage of them).

94. Zook, *supra* note 74.

95. Nigeria has a per capita GNP of $300, and Bangladesh and Vietnam each have a per capita GNP of $350. WORLD BANK, WORLD BANK ATLAS 2000, at 42–43 (2000) (providing figures for 1998).

96. *Compare* U.S. DEPARTMENT OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 518 (120th ed. 2000) (stating that there were 154 million credit card holders in the United States in 1998), *with* Brian Carvalho & Swati Prasad, *The Credit Cripples*, BUS. TODAY, Aug. 20, 2001–Sept. 2, 2001, at 39 (reporting that in India there were 5 million credit card holders).

97. See, for example, the disparity in international registrations of marks under the Madrid Agreement Concerning the International Registration of Marks. *See* World Intellectual Property Organization, Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks, *at* http://www.wipo.org/madrid/en/ (last modified Oct. 15, 2002).

98. Here I use the term windfall to refer to the large economic rent sometimes garnered by the domain name registrant because of the low initial price of the domain name. One scholar defines windfall to refer only to *unexpected* gains. Eric Kades, *Windfalls*, 108 YALE L.J. 1489, 1491 (1999) (defining a windfall as an unexpected gain independent of work, planning, or other productive activity). He proposes that society share in such unexpected gains because a windfall tax does not

These windfalls are not shared among the people of the world, but rather fall to a privileged few, exacerbating existing inequalities. A recent World Bank study reports that "[o]nly 31 of the 26,088 applications for patents filed in 1997 under the auspices of the African Intellectual Property Organization were from residents of Africa."[100] This amazing disparity is not due to the lack of creativity or invention on the part of Africans. A formally equal domain name regime founded on first possession will inevitably result in similar disparity.[101]

3. Intergenerational Equity.—A landgrab shows little concern for questions of intergenerational equity.[102] A first-come, first-served policy obviously privileges the current generation at the expense of future generations. By the time a person in the future comes to claim her stake in cyberspace, the most valuable plots will be gone. Proponents of the current system might offer three defenses to this criticism. First, all domain names will be bequeathed eventually by current owners to people in the next generation. Second, new TLDs can be opened up in the future, creating spaces that are wide open (though this would counsel slowing the pace of such creation). Third, and perhaps most importantly, the current domain name system may not survive into the next generation as cyberspace evolves further.

Still, the concern with intergenerational equity has force. First, relying on intergenerational bequests favors the children of those privileged enough to obtain valuable domain names now, thereby extending that privilege further through time. Second, while new TLDs might be reserved for the future, it seems likely that the ones with the greatest commercial value[103] will be released for settlement quickly given the pressures from those who hope to exploit those TLDs. Third, while Internet technology will certainly

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distort economic behavior. *Id*. at 1494–1501. Richard Epstein recognizes the windfall made possible by a rule of first possession, but argues that logistical reasons favor such a rule nonetheless. Richard A. Epstein, *Luck*, 6 SOC. PHIL. & POL'Y 17, 26–27 (1988). I consider his claims below. *See infra* notes 105–27 and accompanying text.

99. *See supra* notes 67–69 (describing a secondary market in domain names, with values at times in the millions of dollars).

100. WORLD BANK, WORLD DEVELOPMENT REPORT 2000/2001: ATTACKING POVERTY 184–85 (2000). It goes on to note that "only 7 of 25,731 applications registered that year by the African Regional Industrial Property Organization were filed by residents." *Id.*

101. *See supra* notes 79–82 and accompanying text (noting a lack of any domain name registrars from Africa).

102. Wendy Gordon raises this important issue of intergenerational equity with respect to intellectual property as part of her concern with the rights of the public against those of the intellectual property creator. Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1557–58 (1993).

103. The most valuable TLDs that might be offered in the future include .shop, .web, .kids, and .xxx. The most recent round of TLD expansion has included two that are equally valuable: .biz and .info.

evolve, it is possible that domain names will continue to be a basic element of cyberspace,[104] much as telephone numbers have survived major technological changes.[105]

A formally equal property regime founded on first possession will result in disparities, both socioeconomic and intertemporal. But it may not be enough to demonstrate this unhappy result, as some might argue that such a result might be a necessary outcome of a just rule. I now turn to the task of critiquing the major justifications for the rule of first possession.

4. Defenses of First Possession.—Richard Epstein has offered perhaps the most important, if qualified, defense of the rule of first possession, so I examine here his arguments in favor of the rule.[106] Epstein argues in favor of first possession by contrasting it with alternatives and judging each according to its "systematic social consequences."[107] The social consequence with which he is principally concerned is the efficient use of resources.

The first alternative he offers is a rule of *second* possession, which he concludes would lead to disaster because no one would be willing to be the first possessor.[108] Such a rule would prove unworkable because no one would ever seek to be first, except by accident. Epstein himself refers to this alternative as a "straw man,"[109] so the comparison can hardly be said to establish the superiority of first possession.

A second alternative he considers is a lottery, which he dismisses because there is no "obvious" scheme by which to award some people more tickets than others[110] and because it presents a "complex system [producing] administrative drag without allocative gain."[111] In sum, Epstein raises three objections to lotteries, and they all seem misplaced. His first is the most puzzling because there is indeed an "obvious" scheme for allocating lottery tickets: namely, one ticket per person. The second objection relates to administrative costs, but it is not readily clear that a lottery is more expensive to

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104. *See* discussion *infra* subpart VI(D) (addressing obsolescence). Claims of the demise of the domain name system have not yet been borne out. *See, e.g.*, Jonathan Zittrain, *Keyword: Obsolete*, WIRED, Sept. 1998, at 1 (describing the plans of Netscape and Microsoft to upgrade browsers to allow users to find websites through proprietary sets of keywords instead of domain names).

105. Telephone subscribers began to be designated by numbers rather than names in 1879, prompted by a concern that the human operators of telephone switchboards would fall ill in an epidemic of measles, to be replaced by inexperienced operators who did not know everyone's name. *See* JOHN BROOKS, TELEPHONE 74 (1976) (noting that "the epidemic quickly passed, but telephone numbers did not"). An all-number system was introduced in the 1950s. *Id.* at 271.

106. Some examples of first possession pre-dating Epstein are critiqued elsewhere. *See* PETER BECK, THE INTERNATIONAL POLITICS OF ANTARCTICA 28–31 (1986) (recounting the history of England's claims of sovereignty over Antarctica).

107. EPSTEIN, SIMPLE RULES, *supra* note 90, at 60.

108. *Id*. at 61.

109. *Id*.

110. *Id*.

111. *Id*.

operate than a system that must adjudicate between two or more people, each of whom claims to be the rightful first possessor.[112] Epstein's third objection, that there is no clear "allocative gain," seems misdirected because there is in fact a clear distributional gain over first possession: "the lottery will choose winners regardless of their race, economic class, educational groups, sex, etc., and winners will tend to be distributed evenly throughout the population."[113] Epstein ignores the fact that first possession will favor certain privileged and identifiable groups: those most likely to be the fastest to possess the object.

Auctions are the third alternative Epstein considers.[114] He decides that an auction would be too difficult to organize in a world transitioning out of a state of nature, since such a world is devoid of a suitable authority that could carry out such a "sophisticated" mechanism.[115] Epstein's criticism is clearly directed at a world different than our own, as we now certainly do have sophisticated authorities capable of auctioning resources.[116] Lest one think that I am critiquing Epstein's argument based on his claims about some primordial state of nature, first possession turns out to be Epstein's proposal for *today's* world, one of the handful of "simple rules for a complex world" by which we should live our lives.[117] Epstein's criticism of auctions as inadequate thus lands off the mark, since it takes aim at a prehistoric world and fails to address the reasons why auctions would prove unsatisfactory today. Epstein recognizes, of course, the viability of auctions in today's world, even proposing "privatization by auction" of environmental resources.[118] And he is well aware of his colleague Ronald Coase's famous proposal that the state auction the electromagnetic spectrum to ensure that the

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112. *Cf.* Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 603 (1988) (arguing that property law sometimes chooses fuzzy standards over easy to administer hard-edged rules because fuzzy standards sometimes "save the fools from forfeiture at the hands of scoundrels").

113. Akhil Reed Amar, Note, *Choosing Representatives by Lottery Voting*, 93 YALE L.J. 1283, 1293–94 (1984) (observing that the "law of averages ensures that, at any given time, an assembly selected by lottery voting would substantially reflect the underlying distribution of votes in the polity" and not be biased on "racial, ideological, religious, or economic" grounds); *see also* Hank Greely, Comment, *The Equality of Allocation by Lot*, 12 HARV. C.R.-C.L. L. REV. 113, 114 (1977) (noting the neutrality of a lottery system given that the pool of possible winners has a "mathematically equal chance of receiving the good").

114. EPSTEIN, SIMPLE RULES, *supra* note 90, at 61–62.

115. *Id.* (describing an auction as "sophisticated," and arguing that "[i]t is difficult to conceive of who could conduct an auction in a world devoid of money and the rudimentary rules of exchange").

116. We see, for example, in Part V that auctions were a major mechanism for distributing American public lands. Government auctions are commonplace, for example, in U.S. Treasury Bonds, electromagnetic spectrum bands, and government contracts.

117. *See* EPSTEIN, SIMPLE RULES, *supra* note 90, at 21 (introducing his book's thesis that the complexity of modern society mandates a return to older, simpler legal rules); John Harrison, *Richard Epstein's Big Picture*, 63 U. CHI. L. REV. 837, 843 (1996) (listing Epstein's seven rules).

118. EPSTEIN, SIMPLE RULES, *supra* note 89, at 304.

rights would go to those who valued them most rather than to those who applied political or financial pressure on the government.[119]

Thus, we see that Epstein's comparison of first possession with some alternatives does not reveal first possession as the superior rule. Moreover, Epstein does not consider other possibilities that might prove superior to his rule according to his own criteria. Consider, for example, a playground-style system for settling property rights based on height.[120] The tallest person (call it the Wilt Chamberlain Rule[121]) gets first pick, the second tallest, second pick, etc. The rule has the virtue of simplicity and seems reasonably easy to administer, offering a simple objective measure rather than the difficult evidentiary review required to determine who arrived first at a site.

Or consider another alternative—what I call the Nelson Mandela Rule: *Everything belongs to Nelson Mandela*. As far as simplicity goes, this is about as good as it gets. All the world's property would have, initially at least, a single, easily identifiable owner. And it turns out that this rule has *all* the virtues that Epstein claims of first possession. It would avoid "premature exhaustion of the fields"[122] and all other tragedies of the commons because Mandela would internalize fully the costs of exploitation. It "leaves each thing with a determinate owner, who is then capable of entering into voluntary transactions over the thing with other persons."[123] It does not pose the "enormous bargaining problems that exist if unanimous consent" is required to use something;[124] one simply has to seek Mandela's permission (Mandela would presumably appoint agents to administer his property portfolio because he would not be able to manage all of it by himself). The Mandela Rule would allow property to be developed in full because there would always be an owner (either Mandela or a later transferee) who would be "secure in the knowledge that the gains from improvement can be captured either by sale or by consuming the proceeds thereof, if desired, during life."[125] Finally, the Rule offers a "system of identification" that is clear and "whose implementation is not too costly."[126]

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119. R. H. Coase, *The Federal Communications Commission*, 2 J.L. & ECON. 1, 35–36 (1959).

120. *See* John Christman, *Distributive Justice and the Complex Structure of Ownership*, 23 PHIL. & PUB. AFF. 225, 225 (1994) (considering the possibility of a distributive principle based upon a "straightforward metric, such as a person's height").

121. This basketball star appears to be a favorite of philosophers. *See* NOZICK, *supra* note 89, at 160–62 (arguing that disparities in income due to special capabilities of people such as Wilt Chamberlain cannot be ameliorated because doing so would violate consumers' free speech right to spend their money as they choose).

122. EPSTEIN, SIMPLE RULES, *supra* note 90, at 62.

123. RICHARD A. EPSTEIN, PRINCIPLES FOR A FREE SOCIETY 27 (1998) [hereinafter EPSTEIN, PRINCIPLES].

124. *Id.* at 28.

125. *Id.* at 30.

126. *Id*. *See also* Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73 (1985) (arguing that possession is a useful symbol of who owns property).

As silly as it is, the Nelson Mandela Rule would have some apparent appeal under Epstein's criteria. This is the natural result because Epstein professes concern only for administrative convenience and efficient use, not for desert[127] or distribution. If efficiency and administrative costs are our only guides, then many privatization rules, not only first possession, will prove attractive. Indeed, the Mandela Rule has lower administrative costs than first possession (since the original holder is easier to identify under the Mandela Rule than under first possession[128]), and equal efficiency consequences.

Epstein also worries about the political dimensions of property allocation rules. His skepticism about the ability of government to exercise properly any significant judgment role with respect to property rights leads him to prefer the first possession rule, which determines the winner of an entitlement through private action, not governmental choice. Epstein observes that the "kind of state" required in a first possession regime is "minimal," whereas other property rules invite "extensive and continuous state control."[129] While Epstein may be right that other property rules often entail a larger governmental role in assigning property rights, there is reason to doubt that the results of individual egoistic actions should prove more attractive than state decisions (made through democratic processes) regarding initial entitlements.

Carol Rose has offered the most prominent explanation of why the rule of first possession has a grip on American law.[130] She observes that the law favors a rule of first possession because of its symbolic value to a commercial people. Law values the communication that the person who undertakes activity with respect to a resource that society recognizes has "possession." By communicating to others that he *possesses* the resource, the first *possessor* performs a valuable service.[131] The notice of possession, if coupled with a legal regime that recognizes ownership, will "facilitate trade and minimize resource-wasting conflict."[132]

But Rose presents this interpretation merely as an explanation of first possession, not a justification. She does not argue that first possession is the best property rule, nor even the best property rule for a commercial people. There are many possibilities other than first possession for communicating

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127. EPSTEIN, PRINCIPLES, *supra* note 123, at 27 (stating that "the strongest justification for the strict rule that first possession yields complete ownership, not the lien for labor, is not one of individual desert").

128. As for subsequent transfers, both rules require the equivalent administrative apparatus to determine whether a person is a holder in due course.

129. Richard A. Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221, 1239 (1979) [hereinafter Epstein, *Possession*].

130. Rose, *supra* note 126.

131. *Id*. at 82.

132. *Id*. at 81.

who owns a resource. First possession might be an attractive mechanism for communication, especially in an environment where there is no property registry. Where there is a property registry, however, there are ways other than first possession to designate who is the owner, thereby facilitating trade and minimizing conflict. Efficient management of the resource often requires private ownership, and notice thereof. First possession is not the only means to achieve these goals. An auction, a lottery, a merit-based system, or even the Wilt Chamberlain Rule or the Nelson Mandela Rule, each offer both private ownership and notice.

When it comes to law, despite the adage that possession is nine-tenths of the law, *first* possession is the rule only when it serves particular social goals. Faced with the competing claims of an aboriginal American nation and the United States government, the Supreme Court in *Johnson v. M'Intosh*[133] favored the United States government.[134] Even though Native Americans clearly had a claim that was prior in time—as First Peoples, they were here first—the Supreme Court determined that the natives' claim was inferior, in part because it believed that "[t]o leave them in possession of their country, was to leave the country a wilderness."[135] Thus, the Court refused the claim that was earlier in time partly because the native peoples did not, by the standards of the Court, make productive use of the land.

And we have seen other important deviations from a rule of first possession. International law, for example, seems to disfavor first possession as a rule for global commons resources. It recognizes that such a rule would favor the richer countries of the world.[136]

There is a particular strangeness in applying first possession to a human construct that has no *a priori* first possessor: In cyberspace, there is no first possessor until the infrastructure permits a first possessor to be identified. That is, the domain name system must recognize the first individual's attempt to claim the domain name in order for there to be a first possessor.[137] The system could as easily have been set up to award the right not to a first possessor but by lottery, in which case the winner of the lottery would become the first possessor.[138] If first possession is to be the rule for domain names, it must be engrafted into the system's architecture.

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133. 21 U.S. (8 Wheat.) 543 (1823).

134. *Id*.

135. *Id.* at 590. According to the Court, the European settlers, on the other hand, "cultivated and improved" the property that they acquired. *Id*. at 602.

136. *See infra* notes 180–86 and accompanying text.

137. That is, while Joe Smith might be the first person in the world to seek a particular domain name, the system does not have to recognize him at all or associate that domain name with him.

138. The domain name system could have awarded domain names in myriad other ways—e.g., according to the phone book (with numbers added to distinguish between people with the same name) or by random assignment.

The rule of first possession does not require productive labor, nor is it the only way to achieve administrative goals such as notifying others as to ownership, which goals can be met by many private property regimes. Thus, we see that first possession has no strong claim to serve as our guiding rule in constructing cyberspace. Perhaps more importantly, this review challenges the central principle in much of intellectual property law that the first person to author or discover something should become its long-term owner.[139] The discussion reveals that defenders of the copyright and patent regime must adduce reasons other than those discussed above.

The principal additional argument offered by scholars in defense of first possession lies in creating incentives for a race. Claims of indigenous peoples also often rely on temporal priority. But these arguments seem applicable only to a special set of circumstances. With respect to domain names, there is little reason to think that the race itself is important.[140] Furthermore, indigenous claims are often grounded in coercive displacement of people, a kind of history inapplicable to domain names.

B. Property Theory: Locke, Bentham, & Hegel

Can the Lockean, utilitarian, and personality theories of private property offer an acceptable justification for the existing domain name regime? I consider each in turn.

1. Lockean Labor Theory.—At first glance, the current domain name privatization system appears to track nicely Locke's property theory.[141] According to Locke, "Whatsoever [a man] removes out of the state that nature hath provided and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property."[142] Like the fruit gatherer in the wilderness, an individual who registers a domain name is simply removing the domain name from the commons and, by so doing, transferring it to her own possession. She has "mixed [her] labour"

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139. *See, e.g.*, Dean Lueck, *The Rule of First Possession and the Design of the Law*, 38 J.L. & ECON. 393, 393–94 (1995).

140. When the race to be the first claimant itself promotes a social goal, there may be certain justifications for a rule of first possession. With respect to domain names, however, there is no reason to suppose that the race itself is important because all possible domain names could be identified by a computer spinning out all possible combinations of alphanumeric characters.

141. Locke's understanding of private property still holds much power over contemporary law. As Paul Goldstein writes, "Bubbling beneath all [intellectual property law] . . . is the intuition that people should be able to hold on to the value of what they create, to reap where they have sown." PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY 11 (1994).

142. LOCKE, *supra* note 30, at 19. For applications of Locke's mixing theory to intellectual property, see Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 296–330 (1988); Gordon, *supra* note 102, at 1540–83; Fisher, *supra* note 89, at 184–89; Seana Valentine Shiffrin, *Lockean Arguments for Private Intellectual Property*, *in* MUNZER, *supra* note 89, at 138–67.

with the domain name,[143] and therefore can now lay rightful claim over the whole name itself. Or so the Lockean story might go.[144]

However, this fatally ignores Locke's understanding that "labor makes for the greatest part of the value of things."[145] This Lockean labor theory of value is central to his property claims and explains why the mixing of labor should result in the acquisition of the worked-on object.[146] According to Locke, "if we will rightly estimate things as they come to our use, and cast up the several expenses about them—what in them is purely owing to nature and what to labour—we shall find that in most of them, ninety-nine hundredths are wholly to be put on the account of labour."[147] For Locke, the major part of the value of a thing arises from human endeavor, not from the thing's natural state of being. Deriving property rights from labor becomes more intuitively appealing if one believes that it is the labor itself that gave the worked-upon object its value. It is this belief that leads Locke's theory to be characterized as one of moral desert: the law grants a person a property right in a thing because that person deserves it as a reward for the virtue of having created the major part of its value.[148] The Labor Theory of Value immunizes Locke's theory from Nozick's can of tomato juice[149]—the mixing

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143. LOCKE, *supra* note 30, at 19.

144. Stephen Munzer distinguishes first possession from labor theories of property as follows: "A first-possession theory says that one can come to own something by being the first person to possess it. It differs from a labor theory because it requires no exertion of effort to make or acquire something." STEPHEN MUNZER, A THEORY OF PROPERTY 288 n.34 (1990); *see also infra* subpart III(A)(1).

145. LOCKE, *supra* note 30, at 28; JEREMY WALDRON, THE RIGHT TO PRIVATE PROPERTY 192 (1988).

146. Waldron seeks to separate Locke's mixing-one's-labor claim from the Labor Theory of Value: He observes that "the Labour Theory of Value can be expressed independently of the 'mixing one's labour' doctrine." WALDRON, *supra* note 145, at 193. But even if the Labor Theory of Value can be logically unlinked from his "mixing one's labour" doctrine, it nonetheless serves as Locke's justification for his basic claim. Locke turns to the Labor Theory of Value in answer to the "strange[ness]" one might initially feel about the granting of property rights based solely on labor. LOCKE, *supra* note 30, at 27 ("Nor is it so strange, as perhaps before consideration it may appear, that the property of labour should be able to over-balance the community of land."). Doing away with Locke's Labor Theory of Value would leave a property rights theory that seems quite unappealing.

147. LOCKE, *supra* note 30, at 27.

148. *See, e.g.*, MARGARET JANE RADIN, REINTERPRETING PROPERTY 105–06 (1993) (referring to "Lockean labor-desert theory"); Fisher, *supra* note 89, at 87 (referring to Locke's theory as "labor-desert" theory); Gordon, *supra* note 102, at 1561 n.159 (describing Locke's theory as a theory of desert). Waldron, however, believes that Locke's theory cannot be properly understood as a theory of moral desert. WALDRON, *supra* note 145, at 201–07. Waldron observes that if the act of laboring—the toil and sweat—were to justify possession, then a person who works on someone else's land (as either an employee or an interloper) should have a good claim to that land. *Id.* at 203–04. Locke's theory does not grant the employee or interloper the land, leading Waldron to conclude that Locke's theory cannot truly be one of moral desert. While Waldron is undoubtedly correct to identify this problem with Locke's theory, it seems likely nonetheless that Locke himself sees his theory as one of desert, and the desert view is the common interpretation of Locke's theory.

149. Wendy Gordon identifies another aspect of Locke's theory that dispenses with Nozick's problem: the Lockean Proviso, *see infra* note 158 and accompanying text, "limits the amount of

of the juice can hardly be said to create the greatest part of the value of the sea.[150] Locke's theory would not tolerate a claim to the entire sea based on the simple mixing.

Neither would Locke's theory accept a claim to a valuable domain name based on nothing more than a small fee and a few keystrokes. The first-come, first-served policy requires very little in the way of productive labor from a domain name registrant.[151] From the comfort of her own office or home, the registrant need only surf over to a domain name registrar or make a toll-free phone call to claim a domain name as her own. This hardly supplies the dominant value in domain names such as SouthAfrica.com or Loans.com, whose value depends on the common understanding of the words employed, not upon the activity of the registrant.[152] Certainly, however, many domain names acquire their true value through the labor of the registrant. Arbitrary or fanciful domain names, such as Google.com, gained their value, large or small, from the diligent enterprise of their site's creators. To be sure, it is possible that some domain names might be so clever and original as to represent a valuable contribution in the choice of the name itself.[153] The important point, however, is that the first-come, first-served policy does not *require* that the registrant expend significant value-creating labor before awarding the name to that person.

Only the possibility of later challenge by a trademark holder[154] offers a direct link to labor. Trademark holders must demonstrate some labor—through actual use—in order to maintain the right to claim the mark.[155] Thus,

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property that can be claimed by an individual," prohibiting, for example, one person from claiming the seas because that would not leave "enough and as good" in common for others. *See* Gordon, *supra* note 102, at 1565.

150. Indeed, the Labor Theory of Value represents a partial response to William Fisher's concern that Locke does not offer much guidance as to the extent of the intellectual property rights that should arise from labor. Fisher, *supra* note 89, at 189. A Lockean approach could justify only those intellectual property rights whose value derives in major part from the labor applied.

151. *See supra* subpart III(A).

152. One possible response would be to say that the domain name has no value until a useful or popular website is built on it. This response, however, ignores the fact that there is a significant market in domain names themselves, devoid of any attached websites. *See supra* text accompanying notes 67–70.

153. Perhaps MyCatHatesYou.com and AmIHot.com fall into this category. *See generally* Hughes, *supra* note 142, at 305–14 (discussing the link between creativity and labor in assessing whether Locke's theory justifies intellectual property).

154. Diane Cabell, *Foreign Domain Name Disputes 2000*, COMPUTER & INTERNET LAW., Oct. 2000, at 5 (surveying the domain name dispute laws in various countries); A. Michael Froomkin, *ICANN's "Uniform Dispute Resolution Policy"—Causes and (Partial) Cures*, 67 BROOK. L. REV. 605, 613 (2002) (explaining that a trademark holder's rights to a term are seldom exclusive); Thomas R. Lee, *In Rem Jurisdiction in Cyberspace*, 75 WASH. L. REV. 97, 124 (2000) (discussing in rem jurisdiction in the context of cybersquatting claims by trademark owners); Jian Xiao, *The First Wave of Cases Under the ACPA*, 17 BERKELEY TECH. L.J. 159 (2002).

155. While the law allows individuals to file an intent-to-use application to reserve a mark, the individual must demonstrate actual use to continue the successful registration of the mark. 15 U.S.C. § 1051(b), (d) (2000). *See also* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 42 (5th

Locke might well support a trademark holder's claim to a domain name because the trademark holder had expended labor to create the value of the mark. Even this claim might face some difficulty in that one could argue that the trademark owner's labor should not necessarily entitle him to an interest in the domain names deriving from that mark, especially given the fact that much of that investment might have been made without any consideration given to domain names at all. This problem is similar to that encountered in the Lockean analysis of the scope of a patent, where the difficulty lies in drawing the boundaries between the patented invention and later improvements.[156] Even given this serious difficulty in concluding that investing in a trademark in the real world merits the grant of the related domain name,[157] the trademark holder's secondary claim on a domain name has at least some direct relationship to labor.

Thus, the current domain name system might find support in Lockean theory for its favoritism towards trademark holders, but it fails the basic labor requirement in its initial allocation system. The current system also fails what has come to be known as the Lockean Proviso—Locke's qualification that appropriation must leave "enough and as good left" in the commons for others to enjoy.[158] The current domain name system clearly allows individuals to transfer domain names into their own hands without any requirement that there be "as good" left for others. The person claiming "Cars.com" is clearly taking a site that is superior to "WebCars.com" or "Icars.com."[159] While the opening of additional TLDs might increase the number of alternative equivalents, it will not do so indefinitely. There are, for example, only a certain number of ways to indicate "shop." It might be said, however,

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ed. 1998) ("[T]he legal protection of the trademark depends on a trademark holder's actually selling the product or service that the trademark designates. You cannot just dream up names for products that you or someone else might someday want to sell, and register the names with the Trademark Office and by doing so obtain a right to exclude others from using these names."). Disuse of a mark will result in its relinquishment. 15 U.S.C. §§ 1051(d)(4), 1058.

156. *See* Fisher, *supra* note 89, at 186–89 (describing the difficulties of applying Lockean theory to intellectual property law); Hughes, *supra* note 142, at 307–14 (critiquing various means of analyzing copyright law, including analogies to patent law and Lockean theory); Yusing Ko, Note, *An Economic Analysis of Biotechnology Patent Protection*, 102 YALE L.J. 777, 791–804 (1992) (considering the impact of biotechnology on patent scope); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEXAS L. REV. 989, 1000–03 (1997) (explaining the difficulties encountered by patent owners in defining patent claims of improvements under patent and copyright law); Jeremy Waldron, *From Authors to Copiers: Individual Rights and Social Values in Intellectual Property*, 68 CHI.-KENT L. REV. 841, 870–75 (1993) (discussing intellectual property law in terms of restricted freedoms and liberty versus license).

157. The problem is further complicated by the fact that the mark might appear in domain names in many TLDs, not just in the .com TLD.

158. LOCKE, *supra* note 30, at 22.

159. Note that Icar.com was itself the subject of a WIPO arbitration. An Italian company sued successfully on the ground that Icar.com infringed on its Italian trademark. Icar SPA v. ICAR (Italy v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0563 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0563.html.

that the Proviso seems a nearly impossible criterion to satisfy for almost any type of property in the world of the twenty-first century, where the entire world cannot match the America of the 1680s, with its seemingly endless "unclaimed" resources.[160]

2. Utilitarianism.[161]—If Locke's theory of private property is the most well-known, the utilitarian justification for private property is the most influential.[162] Bentham's mandate to seek the greatest good for the greatest number[163] supplies the basic utilitarian principle. The measure of the goodness of any social regime—the domain name system, for instance—is its relative ability to enhance aggregate social welfare, where welfare is defined exclusively in terms of utility.[164] The utilitarian rule is simple: we should grant private property rights to someone if doing so would increase overall societal welfare more so than other alternatives.

Utilitarianism underlies much of American intellectual property law, with roots as deep as the U.S. Constitution, which empowers Congress to establish copyright and patent protections "[t]o promote the Progress of Science and useful Arts."[165] This clause has been read by the Supreme Court as endorsing a view that copyrights and patents are granted to enhance the "public welfare."[166] Thus, the law grants copyrights and patents in order to spur the production of creative works and inventions, respectively, fearing that without property rights in the intangible creation, there would be little

160. *See supra* note 30.

161. Epstein acknowledges the convergence between his theory and utilitarianism, *see* EPSTEIN, PRINCIPLES, *supra* note 122, at 14–15, but these two theories are sufficiently distinct as to merit separate treatment.

162. Justin Hughes, *The Personality Interest of Artists and Inventors in Intellectual Property*, 16 CARDOZO ARTS & ENT. L.J. 81, 81 (1998) (observing that "economic" theory has provided the "dominant understanding" of justifications for private property).

163. JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 12–13 (J.H. Burns & H.L.A. Hart eds., Athlove Press 1970) (1789) ("An action then may be said to be conformable to the principle of utility . . . when the tendency it has to augment the happiness of the community is greater than any it has to diminish it.").

164. On welfarism generally, see Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001) (arguing that public policy should only concern itself with welfare, not with fairness); Amartya Sen, *Utilitarianism and Welfarism*, 76 J. PHIL. 463 (1979) (categorizing various conceptions of welfare, including the utilitarian conception).

165. U.S. CONST. art. I, § 8. Of course, promoting progress of science and useful arts would also be consistent with other moral theories, including many broadly consequentialist ones.

166. The Court noted the "economic philosophy" behind the Copyright Clause, which it described as "the conviction that encouragement of individual effort [motivated] by personal gain is the best way to advance public welfare." Harper & Row, Publishers, Inc. v. Nation Enter., 471 U.S. 539, 558 (1985) (quoting Mazer v. Stein, 347 U.S. 201, 219 (1954)). The Court recalled this most recently in its *New York Times Co. v. Tasini* opinion. New York Times Co. v. Tasini, 533 U.S. 483, 495 n.3 (2001); *see also* Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945) (describing patents as monopolies to serve the public interest).

incentive to create because of people free-riding on the creator's work.[167] A similar explanation is offered for trademarks: a manufacturer would not invest in a brand if competitors could borrow the brand name at will, thereby reducing the incentive for the manufacturer to supply goods of a consistent quality.[168] The utilitarian account rests on a central empirical claim; namely, that awarding property rights in intangible products will substantially increase the creation of such products.[169]

But this incentive-based account seems difficult to jibe with the current domain name system. Awarding the domain name to the first comer hardly enhances the creation of valuable intangible products. If we wanted to create domain names, we could simply run a computer program that would generate all the possible combinations of words, proper names, abbreviations, acronyms, or letters. The identification of names seems by itself not to be a socially valuable endeavor.

Still, it must be noted that a first-come, first-served policy would seem to offer a number of advantages from a utilitarian perspective. It distributes domain names quickly—indeed, it has encouraged a new land rush[170]—and it does so with little administrative procedure. The major welfare defect of this system does not emerge until later. Clearly, a first-come, first-served system does not guarantee that the first mover will be the person who can make the

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167. Free-riding becomes possible because much of intellectual property is thought to be non-rivalrous (i.e., one person's consumption of the good does not diminish the amount available for another). The belief that much of intellectual property is non-rivalrous has led some to the opposite conclusion from that urged by contemporary law and economics scholars. Some argue that exclusive rights in intangible products should be sharply circumscribed. John Perry Barlow, *The Economy of Ideas*, WIRED, March 1994, http://www.wired.com/wired/archive/2.03/economy.ideas.html. Thomas Jefferson's vivid support for free information is often cited in this regard: "He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me." Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), *in* XIII THE WRITINGS OF THOMAS JEFFERSON 334 (Andrew A. Lipscomb & Albert Ellery Bergh eds., 1905); *see also* Graham v. John Deere Co., 383 U.S. 1, 8–10 (1965) (citing Jefferson's letter to Isaac McPherson).

168. Protecting trademarks spurs investment in branding, creating an incentive to produce products of a consistent quality. *See* Landes & Posner, *supra* note 65, at 269 (noting that "trademark protection encourages expenditures on quality"). Trademarks assist the market in disseminating information about a product.

169. Scholars have struggled to assess the welfare consequences of American intellectual property law. Some have argued that American law is overly generous in granting property rights in intangibles, stultifying future invention and creativity by requiring future creators or competitors to license or purchase the intangible from the rights holder. *See infra* note 369; *see also* L. Ray Patterson, *Copyright in the New Millenium: Resolving the Conflict Between Property Rights and Political Rights*, 62 OHIO ST. L.J. 703, 718–19 (2001) (describing the steady expansion of American copyright law from the 18th century to the present). However, conservative scholars have generally stepped forward in defense of the current contours of American intellectual property law, finding it to be largely efficient. *See, e.g.*, Landes & Posner, *supra* note 65, at 265–66 (concluding that trademark law "can best be explained by the hypothesis that the law is trying to promote economic efficiency"); POSNER, *supra* note 155, at 43–50 (discussing, approvingly, the economic justifications of existing intellectual property law).

170. *See supra* notes 40–46 and accompanying text.

most productive use of the domain name (where productivity is defined by market value). If market forces could reliably correct the error of the initial distribution, then the initial error might not seem important for efficient use. And this is where we find the main deficiency, as seen from a utilitarian standpoint: the system does a poor job of ensuring that domain names end up in the hands of the persons who value them most. Because of bargaining failures that I describe later,[171] there is no guarantee that the initial registrant will transfer the domain name to a person likely to make more productive use of the name. Thus, the current domain name system routinely results in a sub-optimal distribution of domain names.

The second key element of the current domain name system, the trademark preemption,[172] also runs afoul of the utilitarian approach. There is no guarantee that the trademark holder who is given the name will make more productive use of the domain name than the original holder. Rather, the test turns on "bad faith"—a determination of the morality of the conduct of the domain name registrant.[173]

3. Personality Theory.—A house, a car, and a wedding ring are deeply important to some of us, so much so that they may be "part of the way we constitute ourselves as continuing personal entities in the world."[174] In addition to the role property plays in creating our identity, property may be intimately connected with—and maybe even a necessary precondition for—peace of mind, privacy, self-reliance, self-realization, security, leisure, responsibility, citizenship, and benevolence.[175] This is the account of property offered by so-called personality theorists, who would recognize private property rights when such rights "would promote human flourishing by protecting or fostering fundamental human needs or interests."[176]

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171. *See infra* subpart VI(C) (describing strategic bargaining, the endowment effect, and path dependence as impediments to mutually beneficial trades and arguing that these impediments are likely to be significant with respect to domain names).

172. *See supra* note 59 and accompanying text (describing a system that allows for the holder of a trademark to assert a right to the domain name employing that trademark).

173. One response to this criticism is that it does not matter, since the parties will simply renegotiate any inefficient judicial or arbitral decision. I address this response in subpart VI(C).

174. Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 959 (1982) (offering as examples of property that are sometimes important to personhood "a wedding ring, a portrait, an heirloom, or a house").

175. Following Jeremy Waldron, Fisher identifies these ten interests (including identity) as among those arguably advanced by a system of property rights. Fisher, *supra* note 89, at 189–90 (citing WALDRON, *supra* note 145, at 295–310).

176. *Id.* at 20. Thomas Grey's summary is particularly illuminating:

> The main rival to Locke's theory within liberal thought was the German Idealist conception of Kant and Hegel, who saw original property resulting from the subjective act of appropriation, the exercise of the individual will over a piece of unclaimed nature. On this view, property was an extension of personality. Ownership expanded the natural sphere of freedom for the individual beyond his body to part of the material world.

But is a domain name as dear as a wedding band? Certainly, a presence on the web is an important extension of one's home, one's public face, and even one's personality. Increasingly, the important moments of our lives are celebrated on the web—pictures of one's children at play and at graduation, wedding photos, vacation snapshots. But even though we may be personally invested in our websites, it is unlikely that the intensity of feeling will be directed towards a particular domain name itself. Indeed, most personal websites are subpages of larger websites and derive their web address from the domain name of their hosting service. The domain name itself is not the central concern.

A domain name might itself be centrally important to a person where the name bears a significant relationship to her. The most likely case of this is a domain name based on one's own name. There may be cases where denying a person a domain name based on her name would reduce that person's opportunity for flourishing—for example, a famous person or a candidate for office.[177]

Most of the time, however, a domain name will present the classic fungible property, with no special attachment to any particular person. Such property is held for purely instrumental value rather than for its own sake. Accordingly, such property cannot be justified on personhood grounds.[178] Most domain names are not treated as personal property but as commercial property to be exploited for financial gain because of their natural characteristics. In general, the personality theory of personal property provides little support to the current domain name system. The first possession rule requires no personal link between the domain name that is sought and the person who seeks to acquire it. Over time, of course, a domain name might acquire the personal significance of an heirloom. However, with respect to the initial entitlements of a young system, such attachments are unlikely to be extensive. Finally, the trademark preemption[179] would find little support in a theory that focuses on the flourishing of natural persons, rather than the corporations that are the main owners of trademarks.[180] Thus,

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Thomas Grey, *The Disaggregation of Property*, *in* 22 NOMOS, PROPERTY 74 (J. Roland Pennock & John W. Chapman eds., 1980).

177. *See* Hughes, *supra* note 142, at 340–41 (suggesting that "[a]s long as an individual identifies with his personal image, he will have a personality stake in that image"). *But see* Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 127, 182–97 & n.338 (1993) (arguing that because of the important "creative . . . role of the media and the audience in the meaning-making process," it would be inappropriate to give broad, exclusive publicity-related rights to a celebrity).

178. *See* Radin, *supra* note 174, at 959–60 (contrasting personal property and fungible property).

179. *See supra* note 57 and accompanying text.

180. Because it focuses on human flourishing, personality theory supports corporate property only indirectly as fungible assets to assist people. *See* RADIN, *supra* note 148, at 12–13, 112 ("Personality theory does not have anything to say about adverse possession by corporations.").

personality theory could justify only the most limited number of domain name entitlements, and certainly not our entire existing system.

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First possession seems hard to defend either as an abstract principle of assigning property rights or as a particularized rule for allocating domain names. In the next Part, I argue that a better approach to domain names must begin with the proposition that domain names represent a new form of global commons.

III. Global Commons: From Deep Seas to Cyberspace

Imagine that a meteor studded with diamonds crashes into the middle of the ocean. To whom does it belong?

First possession offers one possibility: The meteor belongs to whomever wins the race to raise it from the ocean bed. The likely outcome of this scenario is that the meteor would be claimed by a party from the richer parts of the world, as these parts would have the technology and capital required to raise the meteor.

Another alternative might be to declare the meteor the property of all humanity.[181] This approach has an obvious egalitarian appeal, but many would argue that it is unwise because of the free-rider problem associated with any salvage where the person undertaking the salvage does not retain the prize.[182] This free-rider problem would appear to relegate the meteor forever to the depths of the ocean. But there is a simple way to resolve this problem: sell the right to own the meteor and distribute the sale proceeds across the world's people.[183] In this way, there would be one defined entity with a property right to the meteor (thereby properly internalizing the benefits of the salvage operation). Yet, at the same time, the salvage would benefit the world's people through the proceeds from the sale of the right to the meteor.

Surprisingly enough, international law shows, at times haltingly, a preference for the latter approach. When it comes to resources located out-

181. Other possibilities abound. For example, the meteor could be awarded to the person who first identified it as an object in the sky, a sort of first "discovery" system. Alternatively, we could grant rights to the meteor as long as it benefited the least well-off persons in the world. *See* JOHN RAWLS, A THEORY OF JUSTICE 65–73 (rev. ed. 1999) (arguing that those better off in society should not use resources to secure even more wealth for themselves unless doing so will also benefit the least fortunate). *But cf.* JOHN RAWLS, THE LAW OF PEOPLES (1999) (ordering international relations on principles other than the difference principle). Yet another possibility would be to give it to the country where it would lead to the largest increase in collective utility.

182. The free-rider problem here arises because everyone would "free-ride" on the efforts of the person who pulled the meteor from the ocean depths. Because of that free-riding, there would be little economic incentive for anyone to pull it up.

183. The auction avoids this problem as follows: By awarding the right to the meteor to a particular person, the auction ensures that there is an appropriate incentive to undertake the salvage because the winner of the auction would internalize the benefits of raising the meteor.

side any state's territory, international law resists the first possession rule. In domains as distinct as the oceans, outer space, and Antarctica, the general rule is to refuse to recognize unilateral attempts to claim resources. Domain names, I will argue, represent a global resource awarded to the first possessor, contrary to the general rule of international law. But first we must ask why international law disfavors first possession, the rule applied to domain names.

In the post-colonial era, developing nations became concerned that richer countries would dominate the resources that lay as yet unclaimed by any sovereign.[184] They recognized that the technological and economic advantage of a few Western powers would allow those countries to exploit the far reaches of the earth and space. By the time the developing world gained the wherewithal to reach the resources of the ocean beds, outer space, and Antarctica, those resources would already be claimed.[185] Accordingly, developing nations set out to establish international legal regimes that prevented unilateral domination of these global common spaces.[186] Instead of a rule of *res nullius*, where the resource lies unclaimed for the taking, they argued for a rule of *res communis*, which requires any use to benefit all humanity.[187] If *res nullius*, the resource belongs to no one; if *res communis*, to everyone. Global commons regimes grew from the recognition that a *res nullius*, first possession approach would advantage certain countries at the expense of others.

I argue that we should treat the domain names that are intended for global use as *res communis*—to be exploited for the benefit of the people of the world. To be sure, international law may not *require* this. Each of the international law regimes for governing claims in the oceans, outer space, and Antarctica developed through long, difficult, and ongoing negotiations

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184. *Cf.* CHRISTOPHER C. JOYNER & ETHEL R. THEIS, EAGLE OVER THE ICE: THE U.S. IN THE ANTARCTIC 162 (1997) (noting that "new states that emerged from decolonization" sought "to correct perceived inequities in the world economic system by establishing international control over resources beyond the limits of national jurisdiction").

185. *See* J.M. Spectar, *Saving the Ice Princess: NGOs, Antarctica & International Law in the New Millennium*, 23 SUFFOLK TRANSNAT'L L. REV. 57, 63 (1999) (noting that, to the group of developing nations known as the G-77, "free and open access had the tendency to suggest 'a commons where resources are up for grabs by the most technologically advanced'") (citing PHILLIP QUIGG, A POLE APART, THE EMERGING ISSUES OF ANTARCTICA 164, 178 (1983)).

186. *See* JOYNER & THEIS, *supra* note 184, at 165 (noting that "[m]ost developing countries consider the [common heritage of mankind] concept as a legally binding prohibition against unilateral exploitation of resources in areas designated a common heritage").

187. *Res communis* can be, and often is, interpreted so that it is effectively equivalent to *res nullius* by saying that the fact that something is "common" only means that anyone can acquire it (which amounts to *res nullius*). I resist this interpretation in favor of one that makes a sharp distinction between *res nullius* and *res communis*. Jonathan Charney seems to make a similar distinction with reference to Antarctica: "Antarctica is not subject to the ordinary legal regime of land territory and rather than *res nullius* it is *res communis*." Jonathan I. Charney, *The Antarctic System and Customary International Law*, *in* INTERNATIONAL LAW FOR ANTARCTICA 51, 58 (Francesco Francioni & Tullio Scovazzi eds., 2d ed. 1996).

among the world's states, not through the application of a general international law principle founded in egalitarianism.[188] Moreover, the regimes are quite fragile, generally untested by actual practice because the exploitation of the deep seas, outer space, and Antarctica remains economically unattractive.[189] The global commons regimes described below serve only to suggest possibilities for management of a global commons and to identify the interests at stake in that process. I refer here only to the "gTLDs," those global domain names with endings such as .com, .net, and .org, and, recently, .biz, .info, and .name. The "ccTLDs" such as .cn (China), .mx (Mexico), and .us (United States) offer national spaces rather than global ones.[190]

I begin by sketching briefly the international law regimes regulating aspects of three major global commons spaces—the oceans, outer space, and Antarctica. I then argue that we should consider domain names as a new form of global resource. I conclude by drawing lessons from these regimes for a new global commons regime for domain names, and, conversely, lessons for global commons regimes from our study of domain names.

A. Deep Seas, Outer Space, and Antarctica

I review here the three principal global commons regimes—the oceans, outer space, and Antarctica. For each regime, I focus on the aspect of that regime that describes whether and how resources may be exploited.

1. Oceans.—The promise of great mineral riches under the deep seabed led to substantial negotiations between the developed and developing states over the regime to govern the exploitation of the seabed. The United States proposed a first-come, first-served system, with international involvement only to create an international registry of claims (to secure the first claimant's property rights) and to set aside a small percentage of revenues

188. The principle of the "common heritage of mankind" might have supplied such a general international law rule, but it remains controversial as an overarching principle of international law. *Compare* Charney, *supra* note 187, at 75 (arguing that the common-heritage-of-mankind principle is not a "rule of general international law applicable to all areas outside of national jurisdiction" because it lacks a wide consensus as to its general applicability), *with* Rüdiger Wolfrum, *Common Heritage of Mankind*, *in* 1 ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 692, 694 (Rudolf Bernhardt ed., 1992) (arguing that the "common heritage principle is part of customary international law . . . providing general but not specific legal obligations with respect to the utilization of areas beyond national jurisdiction").

189. *But see* Michael Field, *Norway and Cook Islands in Major Seabed Mining Deal*, AGENCE FRANCE-PRESSE, Sept. 22, 1997, 1997 WL 13399707 (reporting on new deep-sea mining technology).

190. A few countries have chosen to treat their ccTLDs as global spaces (e.g., Samoa's .ws and, most famously, Tuvalu's .tv), but this election should not mean that they have thereby ceded the economic value of that domain space to the entire world. Indeed, they have treated them as world spaces precisely in order to maximize their value for the domestic population.

from exploitation for sharing with landlocked states.[191] The developing states objected that such a plan would principally benefit the developed states because of their technological advantage.[192] Ultimately, the regime negotiators (with the prominent exception of the United States[193]) agreed to a plan that sought to balance the need to make exploitation worthwhile with the desire to share widely the benefits of that exploitation.[194]

The resulting United Nations Convention of the Law of the Sea declared the high seas and their deep seabed resources to be the "common heritage of mankind."[195] Mining would be permitted, but only under a regime that would benefit all states, not just the mining state. Under this regime, a private company seeking a mining permit must first attract a state sponsor and then apply to the International Sea-Bed Authority, an international organization created by the 1982 Convention.[196] In an application of the familiar fair division algorithm of "I cut, you choose,"[197] the company submits maps of two sites to be mined ("I cut"), from which the Authority chooses one for itself and the other for the company ("you choose").[198] The

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191. JOHN VOGLER, THE GLOBAL COMMONS: ENVIRONMENTAL AND TECHNOLOGICAL GOVERNANCE 63 (2d ed. 2000).

192. *Id*.

193. The United States has not yet signed or ratified the treaty. *See* Multilateral Treaties Deposited with the Secretary-General, *at* http://untreaty.un.org/English/bible/englishinternetbible/bible.asp (last modified Nov. 29, 2002) (providing information on the status and parties to multilateral treaties under the auspices of the United Nations). The United States did sign, but again did not ratify, the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. *See id*.

194. Some developing states had sought a regime where all exploitation of the deep seabed would be undertaken by the Authority through private subcontractors. Industrialized states, on the other hand, favored a regime where exploitation would be conducted by states and private companies licensed by the Authority. Henry Kissinger proposed the "parallel regime" compromise, in which the Authority, through the Enterprise, as well as States and private companies, would engage in mining activities. *Message from the President of the United States and Commentary Accompanying the United Nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of the Part XI Upon Their Transmittal to the United States Senate for its Advice and Consent*, 7 GEO. INT'L ENVTL. L. REV. 77, 166 (1994).

195. United Nations Convention on the Law of the Sea 1982, *opened for signature* Dec. 10, 1982, part XI, §1, art. 136, 21 I.L.M. 1245, 1293 (entered into force on Nov. 16, 1994).

196. One commentator describes the Sea-Bed Authority as representing humankind. Rüdiger, *supra* note 188, at 693.

197. *See generally* STEVEN J. BRAMS & ALAN D. TAYLOR, FAIR DIVISION: FROM CAKE-CUTTING TO DISPUTE RESOLUTION (1996) (explaining how the "I cut, you choose" principle may be applied in various situations to allocate goods fairly among all parties involved); Michael J. Meurer, *Fair Division*, 47 BUFF. L. REV. 937 (1999) (reviewing Moulin's COOPERATIVE MICROECONOMICS: A GAME-THEORETIC INTRODUCTION and Young's EQUITY: IN THEORY AND PRACTICE, which encourage a new emphasis on fairness in the economic analysis of law). This "cake-cutting" procedure achieves an equitable division even without a supranational sovereign to determine whether a division is fair. Because of this, the "I cut, you choose" procedure is especially useful in the international sphere, where there is no superior sovereign authority.

198. ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 125 (3d ed. 2000).

Authority's development arm, called the Enterprise, then has the right to develop the site reserved by the Authority, with the proceeds from the mining to be shared "equitably"[199] among the states of the world, "taking into particular consideration the interests and needs of developing States."[200] Because the Enterprise, a public entity, itself retains resources to develop later with a private partner, some have criticized the regime as socialist.[201]

2. Outer Space.—Two years after Sputnik, the United Nations General Assembly resolved that space exploration should occur in the common interest of mankind and for the benefit of all states "irrespective of their economic or scientific development."[202] The Outer Space Treaty of 1967 incorporated these principles in its opening Article, stating: "[T]he exploration and use of outer space . . . shall be carried out for the benefit . . . of all countries, irrespective of their degree of economic or scientific development."[203] The Outer Space Treaty, however, assiduously avoided declaring outer space and celestial bodies "the common heritage of mankind," preferring instead to label them "the province of all mankind,"[204] not susceptible to appropriation by states.[205] The difference in the formulation may well be significant. The idea of the "common heritage" is generally construed to require the equitable sharing of that resource, but the phrase "province of all mankind" may allow for dispute on this point.[206]

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199. United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, art. 140, 21 I.L.M. 1245, 1293 (entered into force on Nov. 16, 1994) (requiring an "equitable sharing of financial and other economic benefits" derived from deep seabed activity).

200. *Id*. art. 160, ¶ 2(f)(i), 21 I.L.M. at 1293.

201. *See, e.g*., William Safire, *LOST at Sea*, N.Y. TIMES, Mar. 31, 1994, at A21 (denouncing the convention for "betray[ing] the spirit of capitalism"). Safire even cites Locke for the notion that property rights vest when "a person mixe[s] his labor with a material resource." *Id*. In order to respond to such criticisms, the convention was amended in 1994 to recognize a "growing reliance on market principles." VOGLER, *supra* note 191, at 67. The power of the Enterprise was accordingly reduced in favor of private development. Initial mining operations would become joint ventures between the Enterprise and a private developer; in addition, the technology transfer obligations and the compensation plan for less developed countries were removed from the treaty. *Id*. at 67–68. The UN General Assembly adopted the modifications on July 28, 1994 and they entered into force two years later. *Id*.

202. G.A. Res. 1962 (XVIII), U.N. GAOR, 18th Sess., Supp. No. 15, at 15, U.N. Doc. A/5656 (1963).

203. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, art. I, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty]. Some equatorial states attempted without much success to declare segments of the geostationary orbits passing over the equator as their sovereign territory. Declaration of the First Meeting of Equatorial Countries, Dec. 3, 1976, *reprinted in* 2 MANUAL ON SPACE LAW 383 (Nandasiri Jasentuliyana & Roy S. K. Lee eds., 1979).

204. Outer Space Treaty, *supra* note 203, art. I.

205. *Id*. art. II (declaring outer space to be "not subject to national appropriation").

206. *See* David Tan, *Toward a New Regime for the Protection of Outer Space as the "Province of All Mankind"*, 25 YALE J. INT'L L. 145, 162–79 (2000) (asserting that the concept of the

The Moon Treaty of 1979 took the next step, designating the moon and its natural resources the common heritage of mankind and calling for a regime to share equitably among all state parties the benefits from the exploitation of those resources.[207] Unlike the Outer Space Treaty, however, this effort did not receive wide support. The United States denounced as socialist the Moon Treaty's mandate that the benefits derived from exploitation be equitably shared.[208] Only ten states (including none of the major space-faring states) have ratified the Moon Treaty to date.[209]

The law governing the exploitation of celestial bodies remains at a standstill. On the one side are the few space-faring nations,[210] which dislike the prospect of sharing their gains from space resource exploitation. On the other side are the many other states that believe that space should benefit all equally.[211] Thus, the international community has not yet settled upon any specific rule to govern the exploitation of such resources.

3. Antarctica.—By the time the United States began to consider claiming part of the frozen continent, other countries had already laid claim to much of it.[212] Trying to rebuff these claims, the U.S. Secretary of State announced in 1924 that, in order to claim sovereignty, states must demonstrate "actual settlement"—a standard that none of the potential claimants at the time could meet.[213] But by the mid-1930s, the United States

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"province of all mankind" should not be equated with the concept of a "common heritage of mankind" and discussing the possible meaning of the former in international law).

207. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* Dec. 18, 1979 U.N.T.S. 3 (entered into force on July 11, 1984) [hereinafter Moon Treaty].

208. KEMAL BASLAR, THE CONCEPT OF THE COMMON HERITAGE OF MANKIND IN INTERNATIONAL LAW 173 (1998).

209. *See* UNITED NATIONS, II MULTILATERAL TREATIES DEPOSITED WITH THE SECRETARY-GENERAL 299 (2002) (indicating the status of UN treaties as of December 31, 2001).

210. Leo B. Malagar & Marlo Apalisok Magdoza-Malagar, *International Law of Outer Space and the Protection of Intellectual Property Rights*, 17 B.U. INT'L L.J. 311, 342 (1999).

211. *Id.*

212. Seven countries—Argentina, Australia, Chile, France, the United Kingdom, New Zealand, and Norway—asserted claims to wedge-shaped sectors of Antarctica between 1908 and 1943. JOYNER & THEIS, *supra* note 184, at 36; Ronald W. Scott, *Protecting United States Interests in Antarctica*, 26 SAN DIEGO L. REV. 575, 601 (1989) (printing a map showing sectors claimed by various countries). Exactly why the United States was not itself among the earliest claimants remains unclear.

213. *See* JOYNER & THEIS, *supra* note 184, at 37 (quoting the U.S. Secretary of State's 1924 announcement and stating that the policy "nearly denied any possibility of states making claims to Antarctica"); BECK, *supra* note 106, at 30 (stating the American policy that "no Antarctic claim would be recognized unless satisfying a strict definition of 'effective occupation,' that is a standard well in excess of existing practice . . ."); F.M. AUBURN, ANTARCTIC LAW AND POLITICS 64 (1982) (quoting the U.S. Secretary of State's 1924 announcement). *See also* Island of Palmas Case (U.S. v. Neth.), 2 R.I.A.A. 829, 846 (Perm. Ct. Arb. 1928), *reprinted in* 22 AM. J. INT'L L. 867 (1928) (requiring a somewhat relaxed version of effective occupation to perfect title to *res nullius* land claimed by discovery). The next fifty years saw many attempts to strengthen territorial claims,

began encouraging private expeditions so as to lay the foundation for its own claims.[214] By the time of the International Geophysical year 1957–1958, the United States had decided to forgo its own claims,[215] due in part to the fact that the sector that remained available to it was "geographically undesirable."[216] Moreover, by making its own claim, the United States would have implicitly ratified the claims of others that rested on similar grounds.[217] Instead, the United States refused to recognize any other country's claims[218] and sought to build on the scientific cooperation of the twelve countries participating in the International Geophysical Year.[219] The resulting Antarctic Treaty of 1959[220] avoided the issue of sovereignty over Antarctica, instead finding common ground in peaceful and scientific use.[221] The Treaty neither recognizes nor denies territorial claims, and it prohibits (or, perhaps more appropriately, "freezes") new claims.[222]

The Antarctic regime was tested most severely when some countries tried to expand it to include mining rights. In 1988, the Consultative

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including American pilots dropping claims markers from the air and Argentine and French women giving birth in Antarctica. *See* AUBURN, *supra*, at 9 (noting "aerial discovery" claims); *id.* at 66 (noting the "peculiarity of American activity . . . of dropping claims papers from aircraft"); *id.* at 42 (noting births in 1978 and 1979).

214. *See* JOYNER & THEIS, *supra* note 184, at 38 (noting a U.S. Congressional award granted to explorer Lincoln Ellsworth for "claiming on behalf of the United States approximately 350,000 square miles of land in Antarctica").

215. While there is an Antarctic region known as the "American sector," the United States has not officially claimed it. AUBURN, *supra* note 213, at 28; *see also* Christopher C. Joyner, *The Antarctic Minerals Negotiating Process*, 81 AM. J. INT'L L. 888, 890 (1987) (noting that only seven countries had actually claimed sections).

216. David J. Bederman, *Theory on Ice: Antarctica in International Relations*, 39 VA. J. INT'L L. 467, 478 (1999); *see also* AUBURN, *supra* note 213, at 28 (describing the unclaimed area as the "most inaccessible and least inviting" area in Antarctica); BECK, *supra* note 106, at 30 (noting that the American government decided against staking a claim partly because of the available sector's "relative inaccessibility and economic unattractiveness"). One author suggests that only fifteen percent of the continent remains unclaimed. *See* Joseph J. Ward, *Black Gold in a White Wilderness—Antarctic Oil: The Past, Present, and Potential of a Region in Need of Sovereign Environmental Stewardship*, 13 J. LAND USE & ENVTL. L. 363, 367 (1998); *see also* BECK, *supra* note 106, at 135 (noting that the "area between 90°W and 150°W . . . remains unclaimed, even if the U.S. government was expected to claim this sector during the 1930s and 1940s").

217. AUBURN, *supra* note 213, at 74.

218. *Id.* at 65 (quoting a U.S. Admiral as saying, "We don't own the continent. Nobody does.").

219. *Id*. at 76 ("We foster international cooperation among the nations active in Antarctica . . . . We continue to attach major importance to programs of scientific research for which Antarctica affords unique conditions.").

220. Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71 (entered into force on June 23, 1961) [hereinafter Antarctic Treaty]. As of October 1, 2002, 33 countries have joined the original dozen signatories of the Treaty. National Science Foundation, *The Antarctic Treaty*, *at* http://www.nsf.gov/od/opp/antarct/anttrty.htm (last modified July 19, 2002).

221. Antarctic Treaty, *supra* note 220, arts. I, II.

222. *Id*. art. IV.

Parties[223] under the Treaty concluded the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA).[224] CRAMRA would have permitted any company sponsored by a Treaty party to mine areas of Antarctica opened for exploration as long as the mining did not harm the environment.[225] But the opposition of environmentalists and developing countries doomed CRAMRA, preventing it from ever taking effect.[226] In its place, the Consultative Parties agreed in 1991 upon the Madrid Protocol to the Antarctic Treaty,[227] which designated Antarctica as a "natural reserve, devoted to peace and science."[228] Rather than authorize mining as CRAMRA would have, the Protocol instituted a conservation regime banning mining.[229]

B. Domain Names as Global Resource

Domain names, unlike the meteor in my hypothetical, did not fall from the sky. Because the United States government funded the creation of the Internet and the domain name system, it might follow that domain names are American. Many will argue that domain names can be neither *res nullius* nor *res communis* because they clearly already belong to a country.

This argument misunderstands the nature of domain names. The parts of cyberspace that are intended for worldwide use are best understood as global spaces with no prior claim by any sovereign. The domain name system does have sovereign spaces in the form of the "country code TLDs" such as .it (Italy), .kr (Korea), and .ph (Philippines).[230] These are national resources and should be privatized for the benefit of the nation's people. However, the so-called "generic TLDs" such as .com, .net, and .org, as well

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223. These include the twelve original signatories and a number of additional countries who had acceded to the Treaty and had undertaken significant scientific explorations in Antarctica. *See id.* art. IX, § 2. Criticism from developing countries was somewhat muted because Argentina, Chile, China, and India were all included among the Consultative Parties. *See* VOGLER, *supra* note 191, at 81–82.

224. Rüdiger Wolfrum & Ulf-Dieter Klemm, *Antarctica*, *in* 1 ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 173, 179 (Rudolf Bernhardt ed., 1992).

225. *Id.* at 180.

226. *Cf.* Bederman, *supra* note 216, at 492–95 (arguing that environmentalists alone were the principal agents of the collapse of CRAMRA).

227. Protocol to the Antarctic Treaty on Environmental Protection, Oct. 4, 1991, 30 I.L.M. 1455 (entered into force on Jan. 14, 1998).

228. *Id*. art. 2.

229. *Id*. art. 7 ("Any activity relating to mineral resources, other than scientific research, shall be prohibited.").

230. The country code spaces are governed by sovereign authorities, though not necessarily the government of the country itself. *See* Graeme B. Dinwoodie, *(National) Trademark Laws and the (Non-National) Domain Name System*, 21 U. PA. J. INT'L ECON. L. 495, 499 n.15 (2000) (noting that "the manager of a country code domain need not be a national governmental organization," though "'the desires of the government of a country with regard to delegation of a [country code top level domain] are taken very seriously'") (quoting ICANN, Internet Domain Name System Structure and Delegation, *at* http://www.icann.org/icp/icp-1.htm) (last updated May 7, 2002).

as the new TLDs such as .biz, .info, and .name, are designated for global use. These should be considered part of the "global commons."

Despite the usual story, cyberspace is not in fact entirely the labor of Americans. The principal commercial value of cyberspace, including domain names, arose only with the invention of the World Wide Web. The World Wide Web, of course, was the product of a European, Tim Berners-Lee, and his European colleagues.[231] This suggests one reason that we should not accept the proposition that American governmental involvement justifies American control.

The global function of these domain names offers another reason why global domain names should be considered a global resource. A Brazilian, an Indonesian, or a Swede may build a website at a .com or a .biz. The global intentions of these spaces make them useful for multinationals and companies with global ambitions.[232] Domain names differ from more typical sovereign resources, which are largely territorial by their very nature. Land, minerals, and fossil fuels generally fit a territorial scheme, even though they may often have cross-border aspects. Even the electromagnetic spectrum has a largely territorial nature, as signals fade with distance. Global domain names, on the other hand, are not territorially delimited. While individual countries can still regulate particular domain names (for example, because a domain name infringes on someone's trademark), the domain name system itself remains non-national.[233]

Moreover, the United States has not claimed the global domain name space as its own. While the Commerce Department retains the authority to regulate the domain name space,[234] it has largely refrained from interfering with the decisions of ICANN, its appointed manager. Official United States policy favors a domain name system outside of national control. The Commerce Department has declared that "neither national governments acting as sovereigns nor intergovernmental organizations acting as representatives of governments should participate in management of Internet names and addresses."[235]

Furthermore, the current system is already supranational. An individual who seeks to own a domain name applies not to a national or local government, but to a registrar accredited by ICANN, a California not-for-

231. *See supra* notes 36–41 and accompanying text.

232. The global nature of these spaces plays a role in how they have been sold by registrars. *See* Dinwoodie, *supra* note 230, at 498 n.9 (noting that "registrars of the names in the generic top level domains have marketed .com domain based on its global characteristics"); *Precision Marketing: Net Dot Com Owner Spins a European Web*, 5 PRECISION MARKETING, Apr. 5, 1999, *available at* 1999 WL 8938619.

233. *Id.* at 499.

234. *See supra* note 55.

235. Management of Internet Names and Addresses, 63 Fed. Reg. 31,741, at 31,744 (June 10, 1998).

profit organization with global ambitions. ICANN's charter requires that its directorate be significantly international, with regional representation from around the world.[236] By vesting control over the domain name system in a non-national body, the current system treats the global domain name system as outside the jurisdiction of any particular country.

Finally, and perhaps most importantly, any effort on the part of the United States or any other country to claim exclusive sovereignty over the global domain name system would likely prove a dramatic failure. The domain name system, like the Internet, depends upon the goodwill of computer operators throughout the world. If any country became disaffected with the management of that system, it could opt out of it in favor of a parallel Internet system.[237] Rather than checking the name-address database in Herndon, Virginia (or its mirror databases elsewhere in the world), the dissenting country's computers would check an alternative database of top level domains. If the United States asserted its exclusive sovereignty over the global domain name space, the rest of the world could point their computers to a new common database of domain names. Admittedly, because of network effects, opting out of the current domain name system would carry a high price, but a sufficiently noxious action by the United States to assert sovereignty could prompt such a move.

C. Global Lessons

With respect to each of the global commons spaces of the deep seabed, outer space, and Antarctica, the world has recognized the fact that a first possession regime advantages wealthy, technologically advanced countries. Enterprises from such countries are more likely to win the race in a first possession regime because of their technology and capital. This prediction has proven accurate with respect to domain names: a first-come, first-served regime in domain names has meant that the richer parts of the world have acquired most of the system's largesse.[238] Recognizing the bias in first possession, countries have negotiated international law regimes that reject first possession for global commons resources in favor of either equitable sharing[239] or a prohibition on commercial exploitation.

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236. ICANN, Bylaws for Internet Corporation for Assigned Names and Numbers art. V, § 6, *at* http://www.icann.org/general/bylaws.htm (Feb. 12, 2002) (specifying the requirement of "international representation" for the Board from each of the following five regions: Europe, Asia/Australia/Pacific, Latin America/Caribbean, Africa, and North America); *see also* Management of Internet Names and Addresses, 63 Fed. Reg. at 31,745 (stating that a new Internet domain name management corporation should have "a board [of directors] from around the world").

237. Another possibility is the increasing valorization of the country domain space. *See, e.g.*, Manu Joseph, *Young Gandhi's Crusade Is Dot-In*, WIRED.COM, Sept. 3, 2001, *at* http://www.wired.com/news/culture/0,1284,46339,00.html (reporting a call for Indians to display nationalism by refraining from registering .com domains in favor of .in domains).

238. *See supra* Part I.

239. *See supra* notes 195–200 and accompanying text.

We see in the American repudiation of claims in Antarctica[240] the possibility of countries simply refusing to recognize earlier claims by other states. This demonstrates another potential defect in first possession regimes. When earlier claims of some states are excessive, one response of a state seeking claims later is to deny the earlier claims altogether, especially if the state that seeks a later claim has gained significant power in the interim.

The deep seabed regime suggests that efforts to structure the exploitation of a global commons in the interest of the world's people may be attacked as contrary to free enterprise. However, it may be possible to reconcile the equitable sharing principle of the common heritage of mankind with free market exploitation. One possibility is to privatize the resource by selling it, thereby allowing the market to exploit the resource and simultaneously obtaining a currency through which to equitably share the value of the resource. I will return to this approach in Part V as one possible way to structure a just global property rights regime in domain names.

The review of global commons regimes in light of the domain name system offers lessons for international law as well. The characterization of the domain name system as a global commons regime introduces the possibility of treating information resources as a new form of global resource. The existing international intellectual property regime seeks principally to obtain global respect for intellectual property rights originating in one state, typically a Western state. In a world in which information is increasingly globalized, a statist regime may no longer prove adequate. Perhaps information itself should be viewed at times as the common heritage of humankind.

IV. Privatization in the Early Republic

At various times in its history, the United States has privatized resources. The Government has privatized, for example, minerals, fossil fuels, and parts of the electromagnetic spectrum.[241] As we reconsider how the new new world's public spaces—domain names—are to be allocated, we might profit from reviewing the history of the disposition of our traditional public spaces—public lands.

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240. *See supra* notes 212–18 and accompanying text.

241. *See generally* R. Preston McAfee & John McMillan, *Analyzing the Airwaves Auction*, 10 J. ECON. PERSP. 159 (1996) (describing the auction of the electromagnetic spectrum); Thomas W. Hazlett, *The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas, and the Punchline to Ronald Coase's "Big Joke": An Essay on Airwave Allocation Policy*, 14 HARV. J.L. & TECH. 335 (2001) (electromagnetic spectrum); Krystilyn Corbett, *The Rise of Private Property Rights in the Broadcast Spectrum*, 46 DUKE L.J. 611 (1996) (electromagnetic spectrum); Carl J. Mayer, Comment, *The 1872 Mining Law: Historical Origins of the Discovery Rule*, 53 U. CHI. L. REV. 624 (1986) (minerals); Andrea G. McDowell, *From Commons to Claims: Property Rights in the California Gold Rush*, 14 YALE J.L. & HUMAN. 1 (2002) (minerals).

My argument does not depend in any way on the analogy of public lands to cyberspace.[242] Cyberspace is not "a kingdom floating in the mysterious ether."[243] Homesteading and website-building are clearly distinct activities, as are land-squatting and cybersquatting. Yet the comparison to public lands draws attention to domain names as a valuable resource. More importantly, the privatization of public lands offers important lessons for the privatization of a valuable resource of the twenty-first century.

I begin with a brief sketch of the early history of the disposition of American public lands. I then consider what lessons this history might offer us today in considering the disposition of cyberspace domains. Our experience with public lands helps us to identify different approaches to allocating a public resource,[244] to predict the virtues and shortcomings of each approach, and to anticipate the types of issues that may arise as the privatization proceeds.

A. Privatizing the Public Lands

1. Land for Revenue.—The Revolutionary War left the young American nation with massive debt.[245] Alexander Hamilton and others viewed the vast public lands acquired during the war as an attractive means of raising cash to retire that debt.[246] The early strategy, accordingly, was to auction land to the highest bidder. The Land Act of 1796 offered at auction 640-acre lots at a minimum price of $2 per acre. Purchasers could buy on credit with only five percent down.[247] Because of the availability of credit, settlers often bid in

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242. In some ways, the land metaphor seems natural. The language of cyberspace, *domain* name, web*site*, cyber*squatting*, and the very term cyber*space*, often reflects a territorial imagination. But the spatial metaphor is not the only natural one. Al Gore's "Information Superhighway," which sees the Internet as a communications medium, offers the major alternative metaphor. *See* Albert Gore, Jr., *Networking the Future; We Need a National "Superhighway" for Computer Information*, WASH. POST, July 15, 1990, at B3; *cf.* Wu, *supra* note 40 (arguing that the Internet should no longer be conceptualized as an abstract whole, but analyzed and allocated according to its uses); Richard Thompson Ford, Against Cyberspace (2001) (manuscript on file with the author) (arguing that a spatial metaphor for Internet communications may import regressive aspects of real space to the Internet); Alfred C. Yen, Western Frontier or Feudal Society?: Metaphors and Perceptions of Cyberspace (SSRN Elec. Library, Working Paper No. 322522, 2002), *available at* http://papers.ssrn.com/sol3/papers.cfrn?abstract_id:322522 (proposing the feudal metaphor as superior to the frontier metaphor for cyberspace).

243. Gorman v. Ameritrade Holding Corp., 293 F.3d 506, 516 (D.C. Cir. 2002).

244. *See supra* subpart III(B) (describing domain names as a global public resource).

245. GATES, *supra* note 15, at 145.

246. *Id.* at 6, 122–26, 145; *see also* BENJAMIN H. HIBBARD, A HISTORY OF THE PUBLIC LAND POLICIES 1–4 (Univ. of Wis. 1965) (1924) (describing Hamilton as a major proponent of raising revenue through public land sales and noting that Thomas Jefferson acquiesced in this policy despite his wish to sell land for very little or to give it away outright). Hamilton's victory meant that the public lands became the charge of the Treasury Department, to be transferred to a newly created Department of the Interior only in 1849. GATES, *supra* note 15, at 767.

247. *Id.* at 125. The Land Act of 1800 extended more favorable credit terms than the previous act. Purchasers could now buy property with 5% down on the day of sale, 25% within 40 days after

excess of their means to pay.[248] From time to time, Congress passed credit relief acts to help buyers meet their payments, but this only encouraged unrealistic bidding in future rounds.[249] Credit purchases of land ended with the Act of 1820, which required full cash payment on the day of purchase.[250] The Act also reduced the minimum price to $1.25 per acre and the smallest tract to 80 acres.

Bidding for land often brought settlers into direct, sometimes violent, conflict with speculators. Many challenged the ethics of speculation, where men sought to make money "not by steadily pursuing a course of tilling the fertile soil, . . . [but by] becom[ing] temporary proprietors."[251] Many believed that speculators harmed the growth of the area by "withholding land from development while they waited for its value to rise."[252]

Both speculators and settlers sought to prevent competitive bidding through intimidation and collusion. Potential competitors in an auction would often agree beforehand not to bid against each other.[253] Settlers who learned that the land they sought would be auctioned would threaten any person who dared to bid against them.[254] Regularized "claims associations"

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the sale, an additional 25% within two years, and the remaining third and fourth installments to be paid in years three and four. *Id.* at 130. After an auction, unsold land ("offered" land) "was open to a 'private sale' at the minimum price of $2.00 an acre in 1800 (after 1820, $1.25 an acre)." *Id.* at 127.

248. *Id.* at 142–43.

249. *Id.* at 134, 142–43. COGGINS ET AL., *supra* note 15, at 82 (noting that "by the end of 1819, over 22 million dollars was owed the federal government, most in arrears").

250. Act of Apr. 24, 1820, ch. 51, 3 Stat. 566 ("making further provision for the sale of public lands"); LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 205 (1973); GATES, *supra* note 15, at 145. If a particular parcel of land was not sold at a public auction, it would be opened to private entry in unlimited amounts at the price of $1.25 an acre. *Id*. at 127. If two applicants wanted the same parcel that was open to private entry, the land was sold to the highest bidder among the two. Act of Apr. 24, 1820, ch. 51, 3 Stat. 567. Lands that reverted to the government through the failure of earlier buyers to complete credit payments and tracts that were bid off at auction but not paid for on the day of sale were auctioned a second time. Private entry was allowed if a buyer was not found at the second auction. *Id*. at 566–67.

251. HIBBARD, *supra* note 246, at 216 (quoting the *Dubuque Visitor*, an Iowa newspaper, which characterized speculation as "the moral upas which taints, with the poison of its influence, every aspiration of the mind after purity of thought and integrity of conduct"). Speculation was widespread. Even George Washington held some 49,000 acres of western land. *Id.* at 209 (noting that Washington valued his western land at about $8.00 per acre).

252. GATES, *supra* note 15, at 149; *see also* HIBBARD, *supra* note 246, at 219 (explaining that speculation had a negative effect, holding land from the market and keeping agriculture in backward conditions).

253. GATES, *supra* note 15, at 151.

254. *Id.* at 150. An Alabama resident, writing in 1830, describes this practice:

> The citizens . . . have . . . resolved for one individual in each township to bid off the whole of the land that they . . . may wish to buy, and the balance of their company to be armed with their rifles and muskets before the land office door, and shoot, instantly, any man that may bid for any land that they want.

HIBBARD, *supra* note 246, at 199.

of settlers, often complete with committees to arbitrate disputed claims,[255] would ensure that the duly appointed "bidder" received the land at the minimum price: "should anyone present be found bidding over the minimum price ($1.25) . . . , woe be unto him."[256]

2. Land for Settlement.—Since before the Revolution, settlers "staked a claim on the edge of the frontier and later, perhaps, pa[id] whoever turned out to be the patent holder."[257] These settlers sought the right to purchase their land cheaply as a reward for their loyalty and bravery in reaching the West and defending the frontier against the "marauding Indians."[258] Responding to these appeals, Congress periodically passed special acts to legitimize retroactively the claims of certain groups of illegal settlers in specified areas, usually for a modest price.[259]

In 1841, the General Preemption Act finally offered general authorization for an individual to claim a maximum of 160 acres, at a price of $1.25 per acre.[260] The Act required the settler to improve the land and build a home.[261] However, these restrictions were often ignored in practice, speculation and fraud being "the common sports of the day."[262] One practice under the Act was "squatting on timberland, stripping it bare [of valuable timber], and then abandoning the claim for another."[263]

With the 1841 Act, public policy shifted strongly towards the use of the public domain to promote settlement rather than raise revenue.[264] Borrowing from Jeffersonian ideals of a citizenry of yeoman farmers,[265] advocates of free land "maintained that every man had a right to a share of the soil."[266]

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255. GATES, *supra* note 15, at 154.

256. HIBBARD, *supra* note 246, at 203; *see also* GATES, *supra* note 15, at 155–58.

257. COGGINS ET AL., *supra* note 15, at 80.

258. *Id*. at 81.

259. GATES, *supra* note 15, at 222. Some members of Congress resisted this, criticizing the squatters as "greedy, lawless, disloyal landgrabbers who had no respect for order, absentee owners, or Indian rights." COGGINS ET AL., *supra* note 15, at 81.

260. COGGINS ET AL., *supra* note 15, at 81; *see also* GATES, *supra* note 15, at 219 (explaining the right of "preemption," the preferential right of a settler without title to buy his claim at a modest price without competitive bidding).

261. GATES, *supra* note 15, at 238.

262. COGGINS ET AL., *supra* note 15, at 81.

263. *Id*.

264. In Congress, one Illinois Representative argued in favor of free land:

> [P]rairies, with their gorgeous growth of flowers, their green carpeting, their lovely lawns and gentle slopes, will for centuries continue to be the home of the wild deer and wolf; their stillness will be undisturbed by the jocund song of the farmer, and their deep and fertile soil unbroken by the ploughshare. Something must be done to remedy this evil.

PHILLIP U. FOSS, POLITICS AND GRASS 20 (1960).

265. COGGINS ET AL., *supra* note 15, at 83.

266. GATES, *supra* note 15, at 390.

Settlers argued that the land had no value until they improved it. To avoid the creation of a land monopoly, some "reformers advocated inalienable homesteads with restrictions on inheritance and provisions for reversion of the land to the government."[267] Free land proponents argued that the poverty of the eastern urban working class "could be ameliorated by offering free land in the West."[268] Their cause was aided by the fact that, by 1862, land sales accounted for less than one percent of the government's income.[269]

The movement for free land culminated in the famous Homestead Act of 1862. This Act passed due to the absence in Congress of Southern pro-slavery representatives who had fought homesteading for fear that it would lead to new anti-slavery states.[270] As before with preemption, each family could receive 160 acres,[271] but now the land was free, with title to follow after five years of homesteading.[272] To meet the requirement of actual settlement, some settlers would simply build doll houses.[273] When homesteading was extended to desert lands, a requirement that the settler irrigate the land was sometimes met by hauling a can of water to the site.[274]

B. History Lessons

1. Privatization Goals and Methods.—Domain names come to us as a sort of "just so" story[275]—this is the way it is and the way it must be. The history of the public lands teaches us that we do not have to accept this, that there are many more possibilities of the way things might be than we have previously allowed. The diversity of methods by which America disposed of its public lands demonstrates the richness of these possibilities. The nation experimented with auctions, giveaways, low prices, development

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267. *Id.* at 392.

268. *Id.* at 390–91.

269. *Id.* at 392.

270. COGGINS ET AL., *supra* note 15, at 83; *see also* HIBBARD, *supra* note 246, at 381–85.

271. An individual could have both a preemption and a homestead, each for 160 acres, though not at the same time because each required residency on the claim. GATES, *supra* note 15, at 394; COGGINS ET AL., *supra* note 15, at 84.

272. COGGINS ET AL., *supra* note 15, at 84. A settler in a hurry could receive title—known as "commuting" the claim—in as little as six months by paying either $1.25 an acre or $2.50 an acre (depending on whether the lot was 160 acres or 80 acres, respectively). HIBBARD, *supra* note 246, at 386.

273. GATES, *supra* note 15, at 488 (quoting President Theodore Roosevelt, who criticized the "fraudulent homesteader who builds a shelter for the night under tall timber"); *id.* at 479 (quoting observer Seth Humphrey, who described such activity as "a great game . . . and full of tricks as the frontier gambling house. Many a man working or clerking in town was 'holding down a claim' by going out to live in his little sodshack over Sunday").

274. COGGINS ET AL., *supra* note 15, at 85.

275. RUDYARD KIPLING, JUST SO STORIES (1912) (explaining, *inter alia*, "how the camel got his hump").

requirements, lotteries,[276] grants to specified groups such as veterans,[277] and set-asides for educational purposes. Even inalienability was suggested,[278] though it does not appear to have been tried.

Each of these methods served a political goal—to raise capital, to encourage settlement, to disperse wealth, to express appreciation (in the case of the veterans), and to support education. This leads us to ask: What political goals are served by the current domain name system, and more importantly, what goals should it serve?

Early on, the primary goal of the privatization of public lands was to raise capital to retire the nation's war debt. Seeking to maximize revenues, the government auctioned the land.[279] In Part V, I suggest that raising revenue should be a primary goal of the current system, a way to bring the benefits of the privatization to all people through the use of the funds raised through sales.

2. Collusion and Corruption.—Of course, as the history of public lands shows, people will resist any effort to extract the offering's true value. History demonstrates the ingenuity with which people approach any privatization, as they devise means to exploit opportunities offered by the government. The government's efforts to auction land to the highest bidder were frustrated by collusion on the part of the bidders, as well as intimidation of potential competition.[280]

Even where the government's goal was to encourage small farm households through cheap land sales or giveaways to yeoman farmers, the original cheap sale or giveaway often led quickly to transfers from yeoman farmers to speculators amassing wealth in land.[281] Sometimes the yeoman farmer turned out to be a timber harvester who exploited the land and quickly moved on to seek another concession.

The fact that private schemes might often defeat government policies should not lead us to throw up our hands but rather to structure a system to minimize private avoidance. For example, a system that would require domain names to be developed as actual websites might only encourage

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276. Connecticut offered its land in the Western Reserve of Ohio by lottery, with the first drawing in 1798. HIBBARD, *supra* note 246, at 11, 210.

277. *See* GATES, *supra* note 15, at 766 (reporting that "veterans of all wars through that with Mexico were given warrants they could exchange for land").

278. *See supra* note 267 and accompanying text.

279. GATES, *supra* note 15, at 765.

280. *See* FRIEDMAN, *supra* note 250, at 204 ("[W]here national policy was congruent with the economic interests of the locals, that policy was carried out more or less well. But when the two conflicted, Washington's arm was never long enough or steady enough to carry through."); HIBBARD, *supra* note 246, at 214 (giving the example of an agreement among buyers not to bid above two dollars for a piece of land that was sold for nineteen dollars per acre).

281. *See* FRIEDMAN, *supra* note 250, at 235 ("Farmers themselves were speculators, who gambled on the rising value of land.").

"dummy" websites,[282] just as the requirement of settlement led to the erection of dummy houses. The need to prevent collusion among bidders in an auction, to take another example, requires extensive monitoring.[283] One important way to enhance compliance is to provide private causes of action, whether in a national court or before an arbitral tribunal, to enforce the legal regime.

Vigilance is also necessary, as history shows, with respect to the government administrators of any privatization regime because there are significant differences in motivations between the governmental principal and the individual governmental agent. During the land disposition, governmental officers were often "weak and corrupt."[284] The domain name system needs mechanisms to control the "governmental" agents in the allocation process.[285]

3. Sovereignty and Environmentalism.—We can draw two additional lessons from the history of the public lands, one dealing with the sovereignty of the government, and another with public mobilization in response to the consequences of privatization.

One important consequence of any disposition of a resource is that it affirms the sovereignty of the entity disposing of that resource.[286] The national government's claim to sovereignty was strengthened by its disposition of the public lands. Even though government policies were often evaded through strategic actions and fraud on the part of local interests, the government's authority to write the rules of the game went unchallenged for the most part. *Johnson v. M'Intosh*, in which an individual sought judicial

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282. We have seen evidence of this in recent trademark disputes, where the domain name holder quickly puts up a website to try to fend off the claim of illegal cybersquatting. *See, e.g.*, Panavision Int'l, L.P. v. Toeppen, 141 F.3d 1316, 1319 (9th Cir. 1998) (describing how the defendant's website in a trademark case brought by the Panavision company displayed pictures of the town of Pana, Illinois in order to demonstrate a claim to the "Panavision" domain name).

283. *See, e.g.*, David Legard, *Singapore Acts to Counter 3G Collusion*, IDG.NET, Nov. 14, 2000, *at* http://www.idg.net/ic_285325_1794_9-10000.html (last visited Sept. 28, 2002) (discussing Singapore's rules against cross-shareholding among bidders and other types of collusion in auctions for so-called "third generation" wireless telecommunications spectrum licenses).

284. FRIEDMAN, *supra* note 250, at 242.

285. Accusations of self-dealing on the part of registrars have been made. For example, reports suggest that Afilias, the manager of the new .info domain name space, has reserved for itself Dot.info, Search.info, Directory.info, and Email.info, which many in the Internet community view as an illegitimate attempt to hoard valuable domain names. *See also* Joyce Slayton, *Where Domains Go to Die—Searching for the Perfect Domain Name? Network Solutions Might Be Holding Out on You*, ZIFF DAVIS SMART BUS. FOR NEW ECON., Feb. 1, 2001, at 44 (reporting that Network Solutions might be hoarding expired domain names and planning to auction them rather than sell them at a nominal price to the first claimant).

286. *See* Charles A. Reich, *The New Property*, 73 YALE L.J. 733, 746 (1964) ("When government . . . hands out something of value, whether a relief check or a television license, government's power grows forthwith; it automatically gains such power as is necessary and proper to supervise its largess.").

recognition of a grant of title by an Indian tribe, offered one challenge to this regime, but the Supreme Court rebuffed it, favoring the title awarded by the European colonists' government over that of the native peoples.[287] The national government's powers expanded as well through its use of land to help build the National Road in Ohio, canals in Illinois and Michigan, and railroads nationwide.[288] ICANN's ability to dole out new TLDs, for example, serves to aggrandize its power, as the world, through inaction, ratifies ICANN's authority.[289] ICANN's ability to set the rules for each new TLD also serves to enhance its sovereignty in cyberspace. For a supranational entity with a cloudy provenance, this support is essential.

An additional lesson might be found in the change in national consciousness in the late stages of the privatization of public lands. In the waning years of the nineteenth century, as the public domain was "visibly vanishing,"[290] we began to see the rise of a conservation movement. From the founding of the Sierra Club in 1892 by John Muir through Theodore Roosevelt's presidency, the nation became increasingly concerned with conserving its natural environment. Perhaps this conservation movement will someday prove to be public land history's final lesson for cyberspace.[291] Perhaps we will see a public dedication to improving the virtual environment of cyberspace—ridding it of pornography in unexpected places, overly aggressive advertising, dead links, and unresolved domain names. Perhaps we might also see the emergence of an environmental justice-type movement concerned with the distribution of cyber resources across society.

V. Privatizing for Global Justice: A Proposal

We live in a world characterized simultaneously by "unprecedented opulence" and "remarkable deprivation."[292] A perverse feature of our current domain name system is that it *promotes* the increasing opulence of certain people in the world, neglecting those whose lives are characterized by deprivation.[293] Can we rewrite this property regime to help ameliorate deprivation rather than increase opulence?[294]

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287. Johnson v. M'Intosh, 21 U.S. (8 Wheat.) 543, 603 (1823).

288. GATES, *supra* note 15, at 767.

289. An early challenge to ICANN's predecessor's TLD authority was rebuffed in court. *See* Name Space, Inc. v. Network Solutions, Inc., 202 F.3d 573 (2d Cir. 2000) (denying antitrust and First Amendment claims against Network Solutions for refusing to add new TLDs).

290. FRIEDMAN, *supra* note 250, at 365.

291. *Cf.* James Boyle, *A Politics of Intellectual Property: Environmentalism for the Net?*, 47 DUKE L.J. 87 (1997) (arguing for political mobilization for the Internet to protect social values such as a public domain modeled on the environmental movement's insights and strategies).

292. AMARTYA SEN, DEVELOPMENT AS FREEDOM xi (1999).

293. *See supra* subpart I(B).

294. Whether reform is possible is considered in subpart VI(E) *infra*.

Yes. I offer here a preliminary sketch of one regime that might accord with equity goals.[295] There are many other possible just systems guided by different visions of the right or the good.[296] My goal is not to suggest that the particular possibility sketched here is necessarily the best one available, but rather to spur thinking about just property regimes with regard to this new resource.

I begin with the proposition defended earlier[297] that domain names are a global commons resource. When we privatize this resource,[298] the benefits of that privatization should be shared equitably[299] among the people of the world.

One method for privatizing domain names to benefit the world's people is to use them to raise revenue, much as Hamilton and others used the public lands of America.[300] Privatizations the world over are often conducted through auctions rather than negotiated transactions or fixed price sales.[301] Auctions offer a relatively transparent mechanism for conducting a privatization, making it more difficult for private entities to receive the resource for a below-market price.[302] The capital raised from these auctions

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295. *Cf.* Duncan Kennedy, *Neither the Market Nor the State: Housing Privatization Issues*, *in* A FOURTH WAY: PRIVATIZATION, PROPERTY, AND THE EMERGENCE OF NEW MARKET ECONOMIES (Gregory S. Alexander & Grazyna Skapska eds., 1994).

296. For example, Robert Cooter and Thomas Ulen suggest that if wealth redistribution is a goal, it should be accomplished by means of taxation rather than reconfiguring property rights. *See* COOTER & ULEN, *supra* note 195, at 104–06.

297. *See supra* subpart III(B).

298. I answer the question "why privatize at all?" in subpart VI(B) *infra*.

299. I do not attempt to grapple with the difficult question of what an equitable distribution would look like. For discussion of the goals of distributive justice, framed as "equality of what?", see AMARTYA SEN, INEQUALITY REEXAMINED ix (1992); *see also* RONALD DWORKIN, SOVEREIGN VIRTUE (2000).

300. *See supra* note 246 and accompanying text.

301. *See, e.g.*, MARK DUMOL, THE MANILA WATER CONCESSION: A KEY GOVERNMENTAL OFFICIAL'S DIARY OF THE WORLD'S LARGEST WATER PRIVATIZATION (2000) (describing the auction of the world's largest water concession by the government of the Philippines); James C. Cox et al., *OCS Leasing and Auctions: Incentives and the Performance of Alternative Bidding Institutions*, 2 SUP. CT. ECON. REV. 43 (1983) (describing auctions of outer continental shelf leases).

302. One scholar has suggested that disputes between trademark holders and domain name holders be settled through auctions, such that if the domain name holder lost the auction, she would be paid by the trademark holder. *See* Gideon Parchomovsky, *On Trademarks, Domain Names, and Internal Auctions*, 2001 U. ILL. L. REV. 211 (2001). While such a system would move the domain name to the person who valued it most, *see infra* subpart VI(C), it seems unsatisfying from a distributional perspective: why should we allow a domain name holder to demand a ransom from the trademark holder?

For a description of some virtues of auctions, see Eric S. Maskin, *Auctions and Privatization*, *in* PRIVATIZATION: SYMPOSIUM IN HONOR OF HERBER GIERSCH 115 (Horst Siebert ed., 1992) ("Auctions provide a familiar and simple method for reallocating resources from sellers to buyers. Their attractive properties have been proven not only in theory but by long experience."); Harold J. Krent & NicholasZeppos, *Monitoring Governmental Disposition of Assets: Fashioning Regulatory Substitutes for Market Controls*, 52 VAND. L. REV. 1705, 1735 (1999). However, auctions have their detractors. *See, e.g.*, Thomas Hazlett, *The Rationality of U.S. Regulation of the Broadcast*

would then be distributed throughout the world.[303] Borrowing from the notion of universal access in telephone service,[304] we might apply those funds to help bridge the digital divide.[305] In this way, the privatization of domain names would help build the infrastructure to bring the benefits of the Information Age to all the people of the world.[306]

This proposal raises at least two concerns. First, will not an auction to the highest bidder simply move domain names to the hands of the richest companies in the world?[307] For example, KumbhMela.com may still end up with a company far from the confluence of the three Indian rivers (again,

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Spectrum, 33 J.L. & ECON. 133 (1990) (arguing that "homesteading" was a more rational mechanism than auction for early distributions of rights in the broadcast spectrum).

303. I leave the choice of distribution mechanism, including the important question of the entity that will carry out the privatization, to later work. On the question of how to distribute equitably, see generally DWORKIN, *supra* note 299 (arguing for an equality of resources that is insensitive to one's background and physical characteristics but sensitive to one's choices); SEN, *supra* note 299 (analyzing equality by first asking "equality of what?"). On why we might distribute the proceeds of a privatization widely, see Amy Chua, *The Privatization-Nationalization Cycle: The Link Between Markets and Ethnicity in Developing Countries*, 95 COLUM. L. REV. 223, 298 (1995) (suggesting that the dispersal of benefits of privatization is one bulwark against the possibility of later nationalization).

304. Jamie N. Nafziger, *Time to Pay Up: Internet Service Providers' Universal Service Obligations Under the Telecommunications Act of 1996*, 16 J. MARSHALL J. COMPUTER & INFO. L. 37, 41 (1997) (describing the subsidization of the telephone service of consumers and rural customers by businesses and urban customers); Ross C. Eriksson et al., *Targeted and Untargeted Subsidy Schemes: Evidence from PostDivestiture Efforts to Promote Universal Telephone Service*, 41 J.L. & ECON. 477 (1998) (arguing for targeted subsidies instead of untargeted ones); Jerry Hausman & Howard Shelanski, *Economic Welfare and Telecommunications Regulation: The E-Rate Policy for Universal-Service Subsidies*, 16 YALE J. ON REG. 19 (1999) (suggesting the improvement of the efficiency of mechanisms to achieve equitable and affordable access to advanced telecommunications and information services).

305. While the Internet has grown phenomenally, there remains a great disparity in the distribution of Internet host computers and users. France has almost as many hosts as all of Latin America and the Caribbean. There are more hosts in New York than in all of Africa. *See* International Telecommunication Union, *The Internet: Challenges, Opportunities and Prospects* (May 17, 2001), *at* http://www.itu.int/newsroom/wtd/2001/ExecutiveSummary.html; *see also* International Telecommunication Union, *Internet Indicators: Hosts, Users, and Number of PCs* (June 20, 2002), *at* http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet01.pdf (reporting global Internet host statistics).

306. This is not as fanciful as it might appear. In fact, registration fees were initially used to raise revenue to build the Internet infrastructure within the United States. From 1995 to early 1998, a portion of the $50 annual registration fee was dedicated to an Internet Intellectual Infrastructure Fund that offset government spending on building network infrastructure. *See* National Science Foundation, *NSF and NSI End Internet Intellectual Infrastructure Fund Portion of Domain Name Registration Fees* (Mar. 16, 1998), *at* http://www.nsf.gov/od/lpa/news/press/pr9817.htm (noting that more than $45.5 million was raised for the infrastructure fund).

307. Auctions strike many people as unfair, but the fairness of the auction must be judged, at least in part, by the distribution of the proceeds. *See* VERNON L. SMITH, BARGAINING AND MARKET BEHAVIOR: ESSAYS IN EXPERIMENTAL ECONOMICS 12 (2002) ("People, when asked, state that it is fairer to allocate surplus football tickets (above season subscriptions) by lottery or queue than by auctioning to the highest bidders. But what would be the effect on behavior and attitudes towards fairness if the auctioning of tickets makes it possible to lower the price of season tickets or build an addition to the stadium?").

because local people may not be able to outbid a better capitalized foreign entity). I think that this objection is misplaced for three reasons: (1) unless we make domain names inalienable, any system of initial entitlements will result, through secondary transfers, in a landscape where many domain names are owned by the richer people in the world;[308] (2) if we believe that efficiency is important,[309] placing the initial entitlement to a domain name in the hands of the person who values it most will certainly promote that goal;[310] and (3) most importantly, by selling the domain name to the highest bidder, we raise revenue that we might use to bridge the digital divide on behalf of all the world's people.[311]

A second difficulty arises because we might feel that certain people should not have to buy domain names. Should the Yanomami have to bid for Yanomami.com?[312] Losing out in the auction, must they settle only for their proportional share of the proceeds of the sale? In response to this concern, we might modify the system as follows. Relying upon Lockean Labor Theory,[313] we observe first that sometimes the major part of the value of a domain name is the result of the work of an identifiable person or group.[314] As such, under Lockean theory, it should belong to that person or group,[315]

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308. When the broadcast spectrum was awarded by lottery by the U.S. government, for example, the awardees would routinely sell their bandwidth to third parties. *See* Krent & Zeppos, *supra* note 302, at 1736 (noting that these "lotteries drew fire for precipitating a secondary auction").

309. For a critical view on the ethical value of the efficiency criterion, see JULES L. COLEMAN, *Efficiency, Utility and Wealth Maximization*, *in* MARKETS, MORALS, AND THE LAW 95 (1988); *cf.* DWORKIN, *supra* note 299, at 66 (stating that "the idea of an economic market, as a device for setting prices for a vast variety of goods and services, must be at the center of any attractive theoretical development of equality of resources").

310. *See infra* subpart VI(C) (explaining why private bargaining will not necessarily lead to efficient results).

311. While the Internet is certainly not as important as other life necessities such as health care and education, it may nonetheless prove quite useful toward these goals. *See, e.g.*, Sofia McFarland, *Lacking Roads, Village Travels Information Highway*, WALL ST. J., Dec. 29, 2000, at A8 (describing the Internet as connecting Malaysian villagers to "doctors, lists of jobs and rice prices").

312. *See supra* notes 85–86 and accompanying text (detailing the Yanomami Indians' struggle to reclaim the web address bearing their name).

313. *See* discussion *supra* subpart II(B)(1).

314. I do not mean to minimize the problems postmodern scholars have raised regarding the concept of the Romantic author. *See* Keith Aoki, *Authors, Inventors and Trademark Owners: Private Intellectual Property and the Public Domain*, 18 COLUM.-VLA J.L. & ARTS 1, 25–34 (1993) (discussing the history, significance, and criticisms of Romantic authorship); Rosemary J. Coombe, *Objects of Property and Subjects of Politics: Intellectual Property Laws and Democratic Dialogue*, 69 TEXAS L. REV. 1853 (1991) (addressing "the political dimension of [the] relationship between legal ownership and cultural authority"); Elton Fukumoto, Note, *The Author Effect After the "Death of the Author": Copyright in a Postmodern Age*, 72 WASH. L. REV. 903, 918–21 (1997) (summarizing the relationship between postmodernism and post-structuralism). Of course, the existing domain name system's deference to trademarks exhibits these same defects.

315. If there are a number of people with such legitimate claims, perhaps there might be an auction exclusively among those people.

without that person or group needing to purchase it in the open market.[316] Personality theory might yield a similar result, at least for non-corporate entities.[317] The virtue of such a rule is that it accords with common intuitions about rightful ownership of domain names. Such a system would award SouthAfrica.com to the South African people and Disney.com to the Disney company.[318] Yet it would deny trademark holders in words like "tonsil"[319] the right to wrest the mark from a third party. In cyberspace, the major value of a domain name based on a generic word such as "tonsil" may come from the word's ordinary meaning rather than from the trademark holder's labor. There are important questions regarding designation of the rightful owner when the name refers to geographical or cultural phenomena. But this difficulty should not cause us to prefer our current domain system, which neglects entirely the interests of geographical and cultural groups and makes controversial social decisions through the market.

Finally, while some may argue that an auction is too market-friendly, others will complain that distributing the proceeds worldwide smacks of socialism. However, the system suggested here is largely consistent with the market mechanism because it creates private property rights in domain names.[320] Indeed, no less an economist than Ronald Coase has suggested that broadcasting rights be auctioned,[321] with the proceeds presumably being used by the government for state purposes.

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316. We could argue that such a rule would be in accord with the personality theory, *see supra* subpart III(B)(3), since it would likely grant a person the principal domain name using her name, which might be important for that person's flourishing. *But cf. supra* note 314 (raising questions of Romantic authorship).

317. *See supra* notes 176–79 and accompanying text.

318. Madonna.com presents an interesting challenge. Who created the value of the domain name? The answer would seem to depend on how the domain name was intended to be used. If it were to be used in a way related to the celebrity, then she likely would have the superior claim. If it were to be used in a religious fashion, perhaps it should be awarded to an appropriate representative of the relevant religious group. Though this raises difficult questions of its own, it is important to recognize that such decisions are currently made by the market.

319. Süd-Chemie AG v. tonsil.com (F.R.G. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0376 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0376.html (ordering the transfer of "tonsil.com" from a California resident to a German chemical manufacturer with products using "Tonsil" as a trademark). Contrast a decision where a common English word was not reassigned to a trademark holder. *See* Hasbro, Inc. v. Clue Computing, Inc., 232 F.3d 1 (1st Cir. 2000) (holding that an Internet company using the domain name "clue.com" did not infringe on the trademark of the maker of the boardgame "Clue").

320. *Cf.* Ezra J. Reinstein, *Owning Outer Space*, 20 Nw. J. INT'L L. & BUS. 59, 92 (1999) (proposing an auction of outer space resources as "occup[ying] the middle ground between *laissez faire* privatization of space development and a belief that space is the equal birthright of all humanity").

321. Coase, *supra* note 119, at 19 (arguing in favor of auctions because they ensure that rights go to those who value them most without improper political or financial pressure); *see also* Matthew L. Spitzer, *The Constitutionality of Licensing Broadcasters*, 64 N.Y.U. L. REV. 990, 1068 (1989) (suggesting the auction of the radio spectrum).

We have the ability to create a domain name system that better corresponds to our concerns for equality and justice than does the existing system. We must seek to implement such a reform, whether it be the one outlined here or some other regime.[322]

VI. Objections and Responses

The reader might raise a number of objections to the general approach of this Article. First, why consider domain names as property? Why not simply declare them instead to be creatures of technology or contract? Second, why privatize domain names? Why not leave them in an unlimited commons, open to all? Third, why should we worry about domain names when they may become obsolete? Fourth, why should initial entitlements matter when the low transaction costs of cyberspace permit efficient transfers? Finally, has the moment for reform already passed? Is it too late for reform? In this Part, I take up these questions.

A. Ontology: Technology, Contract, or Property

What are domain names anyway?[323] Should we think of domain names in the way they were originally intended—as simply a mnemonic, hierarchical address *technology* for a networked computer? Or should we treat domain names as *contractual* rights, the right of the individual domain name holder vis-a-vis the company that registered the name on the holder's behalf, with the terms set forth in the agreement between the registrant and the registrar? Or, finally, should we think of them under the exalted rubric of *property*, with its attendant concerns of allocation, wealth distribution, and economic productivity? In this section, I argue that, even though domain names involve both technology and contract, domain names are better understood as a new form of property arising in the Information Age.

1. Technology?—The pioneers of the Internet protocol sought to avoid any characterization of a domain name as property, believing that by so doing they were removing domain names from political struggles.

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322. Australia leads the way. It indeed auctioned generic domain names in the .au domain (which were previously withheld). Vivienne Fisher, *auDA to Auction Rare Domain Names*, ZDNET AUSTRALIA (Dec. 18, 2001), *at* http://www.zdnet.com.au/newstech/ebusiness/story/0,2000024981,20262455,00.htm.

323. Lawyers involved in domain name disputes have been forced to wrestle with this question in their practice. *See* David Henry Dolkas & S. Tye Menser, *Is a Domain Name "Property"?*, *at* http://www.graycary.com/articles/interest/interest_42.html (last visited Dec. 4, 2002) (concluding from review of case law that "[f]or most, if not all . . . claims [other than those brought under the in rem provisions of the ACPA], a domain name will not be viewed as property or, at least, not as tangible property"); Ellen Rony, *Clicks or Mortar: Are Domain Names Property?*, *at* http://www.domainnotes.com/news/article/0,,5281_350311_1,00.html (Feb. 2000) (supporting the view that domain names are property, based in part on cases where the parties or the court treated domain names as property).

"Concerns about 'rights' and 'ownership' of domains are inappropriate," Jon Postel declared.[324] Domain names should remain the realm of technical administrators, shunning legislatures, courts, and lawyers.[325] But as James Boyle points out, while technical solutions may appear to avoid difficult questions of control and ownership, they in fact "elide the question of power—both private *and* public."[326] Boyle continues unerringly:

> The technology appears to be "just the way things are"; its origins are concealed, whether those origins lie in state-sponsored scheme or market-structured order, and its effects are obscured because it is hard to imagine the alternative. Above all, technical solutions are less contentious; we think of a legal regime as coercing, and a technological regime as merely shaping—or even actively facilitating—our choices.[327]

Technology appears to offer neutrality, while legal rules clearly privilege some and disadvantage others.[328]

The reality, however, is quite different.[329] The current domain name system makes policy decisions.[330] The first-come, first-served system carries the appeal of apparent fairness but in fact advantages those with access to technology and money, allowing them to act quickly to claim domain

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324. *See generally* J. Postel, *RFC 1591: Domain Name System Structure and Delegation*, *at* http://www.isi.edu/in-notes/rfc1591.txt (Mar. 1994) (describing the structure and administration of domain names).

325. Mockapetris does seem to recognize that there will be "political" decisions to be made regarding the domain name system, but he does not propose any methods for making such decisions. *See* Paul V. Mockapetris & Kevin J. Dunlap, *Development of the Domain Name System*, INFORMATIONAL SCI. INST. REPRINT SERIES, Dec. 1998, at 1, 11 (noting that "[t]echnical and/or political solutions to the growing complexity of naming will be a growing need").

326. James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty, and Hardwired Censors*, 66 U. CIN. L. REV. 177, 205 (1997).

327. *Id*.

328. Many would not accept my premise that legal rules are generally biased. *See* Herbert Wechsler, *Toward Neutral Principles of Constitutional Law*, 73 HARV. L. REV. 1, 9–10 (1959) (asserting that adherence to neutrally framed standards of review protects "the Court against the danger of . . . bias"); Suzanna Sherry, *All the Supreme Court Really Needs to Know It Learned from the Warren Court*, 50 VAND. L. REV. 459, 481 (1997) (noting Americans' "liberal attachment to . . . formal neutrality"). *But see* Barry Friedman, *Neutral Principles: A Retrospective*, 50 VAND. L. REV. 503, 503–07 (1997) (criticizing Professor Sherry's rejection of substantive neutrality in favor of formal principles).

329. *See* J. M. Balkin et al., *Filtering the Internet: A Best Practices Model*, *in* PROTECTING OUR CHILDREN ON THE INTERNET: TOWARDS A NEW CULTURE OF RESPONSIBILITY 199 (Jens Walterman & Marcel Machill eds., 2000), *available at* http:/www.yale.edu/lawweb/jbalkin/articles/Filters0208.pdf (stating that "[t]echnology in practice is not neutral in its effects or in the values that it promotes or hinders"). Despite the biases of technology, Balkin and his colleagues at the Information Society Project argue that the filtering of information content should be performed through technological means rather than by the state because of the possibility of interference with free speech. *Id*.

330. As Lawrence Lessig writes, when it comes to cyberspace, "There are choices we could make, but we pretend that there is nothing we can do. . . . We build this nature, then are constrained by this nature we have built." LESSIG, CODE, *supra* note 13, at 234.

names.[331] Moreover, the current system places policy-making authority in the hands of ICANN,[332] a largely undemocratic organization,[333] and private registrars,[334] as well as the market (through which decisions are made about the distribution of domain names after the grants of the initial entitlements). As Lawrence Lessig informs us, markets, architecture, and social norms can regulate behavior,[335] sometimes as well as or better than law. Thus, we see that the alternative to property is not freedom through technology, but rather property without democratic control.[336]

2. Contract?—The claim that a domain name is nothing more than a contract right has some apparent appeal. A person gains a right to a domain name ostensibly by virtue of her agreement with a domain name registrar. Indeed, the Virginia Supreme Court relied on this fact to conclude that a domain name represents simply a service contract, not property subject to

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331. *See supra* subpart I(B).

332. A. Michael Froomkin, *Wrong Turn in Cyberspace: Using ICANN to Route Around the APA and the Constitution*, 50 DUKE L.J. 17, 94–105 (2000) (arguing that ICANN is engaged in policy-making, not just "routine standard-setting" or "technical coordination").

333. *See* James Boyle, *A Nondelegation Doctrine for the Digital Age*, 50 DUKE L.J. 5, 8 (2000) (concluding that, "as an international democratic organization, [ICANN] falls short"); Froomkin, *supra* note 332; *see also* Richard Louv, *Internet No Bastion of Democracy*, SAN DIEGO UNION-TRIB., Nov. 19, 2000, at A-3 (calling ICANN a "virtual banana republic"); Paul Mason, *IT Manager Slams Internet Elections as "Undemocratic"*, COMPUTER WKLY., Sept. 7, 2000, at 20 (complaining that no one other than ICANN-backed candidates has a chance of winning a board seat); Joe Salkowski, *Insiders Keep Tight Hold on Net Control*, CHI. TRIB., Nov. 6, 2000, at 5 (detailing a secret, post-election meeting of the ICANN board of directors at which it extended the terms of appointed members to dilute the strength of the newly elected user-backed members); Staff Editorial, *Democracy and the Net*, HARV. CRIMSON, U-WIRE, Oct. 2, 2000 (remarking that ICANN suffers from a "severe lack of democratic participation"); Jonathan Weinberg, *ICANN and the Problem of Legitimacy*, 50 DUKE L.J. 187, 257 (2000) (arguing that ICANN employs command-and-control regulation).

334. The policy-making role of private registrars is evident in the power of the registrar of a new TLD to set the rules on how to allocate domain names in the new space. The registrar for the .name TLD, for example, must decide how to choose between applicants with the same name; for example, which person who calls himself "Sting" deserves the domain name? *Cf.* Gordon Sumner, p/k/a Sting v. Michael Urvan (U.K. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0596 (July 20, 2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0596.html (deciding that a Georgia gun broker had a legitimate claim to the "sting.com" domain name against a challenge by the famous British musician). The policy-making function becomes especially apparent when the TLD is restricted to a certain category of entities, requiring the registrar to decide who is a "true" member of that category. The registrar of .pro, for example, must decide who is a true "professional." *See* http://registrypro.com/aboutpro.htm (last visited Sept. 25, 2002) (noting that registrations are limited to "certified professionals," without describing which certifications are considered authoritative).

335. LESSIG, CODE, *supra* note 13, at 87.

336. Declaring domain names to be "property" will not, by itself, offer a corrective to this vision of unregulated private power, and it could even make the problem worse if property rights in domain names are construed to be absolute. A corrective is possible only by using a new understanding of domain names to craft a more thoughtful and equitable regime of rights in domain names.

garnishment.[337] Other courts have reached similar conclusions.[338] In effect, the Virginia Supreme Court distinguished contract rights and property rights on the basis of the source of the right: if the right arises from an agreement between two parties, it is contractual; if the right arises instead from a grant or acknowledgment of the state, then it is a property right. However, this distinction proves unhelpful, as an example will demonstrate. When Jill buys a house from Juan, it could be said that her right to own the house arises from a contract. But we know that the right to own the house is a property right, indeed, the quintessential property right. Conversely, when Juan asserts his right to be paid for the house under the sale agreement with Jill, he can do so successfully only because the state recognizes his claim. But we know that the right to claim payment for a services agreement is a contractual right.

A more helpful distinction lies in the identity of the individual or individuals against whom a right can be asserted. If the right can be asserted solely against the contractual counterparty, then the right should properly be declared to be contractual. If the right can be asserted against third parties not in privity with the holder of that right, then it seems appropriate to consider characterizing the right as a property right, even if contract rights may also be involved.[339] Unlike contracts, property gives one rights against third parties.[340]

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337. Network Solutions, Inc. v. Umbro Int'l, Inc., 529 S.E.2d 80, 86 (Va. 2000) (holding that the judgment creditor could not garnish the domain names held by the debtor because domain names represent service contracts, not property).

338. A New York State trial court has recently followed the Virginia Supreme Court in concluding that domain names are contracts and not property. Zurakov v. Register.com, No. 600703/01 (N.Y. Sup. Ct. July 25, 2001), *available at* http://decisions.courts.state.ny.us/nyscomdiv/AUG01/600703-01-002.pdf. Zurakov sued Register.com because it had put up a "Coming Soon" advertising page at his domain name, thus depriving him of his supposed "exclusive property right" in the domain name. The trial judge dismissed the claim on the ground that the registrant had a "contract right, not a property right, in the domain name." *Id.* at 3. The Court reviewed his contractual rights under his domain name agreement and noted that they did not include "control" over the domain name, since "[t]he word 'control' never appears in the language of the contract." *Id*. *Cf*. Dorer v. Arel, 60 F. Supp. 2d 558, 561 (E.D. Va. 1999) (noting that a "domain name that is not a trademark arguably entails only contract, not property rights," but deferring final decision on the issue). *But see* Online Partners.Com, Inc. v. AtlanticNet Media Corp., 2000 WL 101242, *9 (N.D. Cal. Jan. 20, 2000) (holding that "a domain name is intellectual property and may be attached under the law").

339. Thomas Merrill and Henry Smith make this point in a recent article, noting that property rights are "in rem—they bind 'the rest of the world.'" Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 777 (2001); *see also* Epstein, *Possession*, *supra* note 129, at 1228 (observing that "[t]he essence of any property right is a claim to bind the rest of the world"). Contract rights, on the other hand, are in personam: "they bind only the parties to the contract." *Id*. at 776–77. *See also* Thomas W. Joo, *Contract, Property and the Role of Metaphor in Corporations Law*, 35 U.C. DAVIS L. REV. 779, 781 (2001) (drawing upon the distinction to argue that characterizing a corporation as a nexus of contracts ignores important aspects of corporations).

340. Contrast, for example, a contract regarding the use of land with a land covenant: the contract will simply bind the two parties, but the covenant, representing a property rule, will run with the land, descending to future purchasers and to the owner's estate.

The holder of a domain name gains exclusive rights to use that domain name, thus preventing third parties from using that domain name without the holder's permission. Specifically, if a third party attempts to register that name, the domain name system will reject the attempt automatically. Like the entry in the county land registry, registering a domain name gives the person much more than a claim against the registrar. The person registering a domain name gains rights against third parties, who are prevented from registering the name themselves. Registering a domain name serves notice to the world that this domain name is assigned to the specified person.[341] Even the right of a trademark holder to wrest a domain name from the original registrant confirms this property characteristic: In that case, the property right belongs to the trademark holder, who can assert a right to a domain name without ever having signed a contract giving her that right. Indeed, the trademark holder can even bring, under U.S. law, an action in rem, the classic action against property, against the domain name itself.[342]

There is something odd about the claim that the registration of a domain name gives one rights against third parties. A positivist[343] might object that there is no clear source of *law* giving an individual the right to claim exclusive control over a domain name since no sovereign has promulgated such a law.[344] How does a domain name registrar come to bind third parties? The difficulty arises from the fact that the traditional governmental function of granting property rights has been delegated for domain names to ICANN.[345] Exclusive control over a domain name occurs as a result of the assignment of that domain name to a particular computer in the global look-up table managed by ICANN.[346] The right to enter a domain name in that look-up table is further managed by ICANN-accredited registrars who function as intermediaries between the person seeking a domain name and the authoritative domain name registry.[347] The governmental function of

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341. The domain name register can be searched easily to determine who the holder of a particular domain name is. *See infra* note 387.

342. Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d)(2) (2002); *see also* Caesars World, Inc. v. Caesars-Palace.com, 112 F. Supp. 2d 502, 504 (E.D. Va. 2000) (ruling, in an action in rem against the possessor of a domain name, that "Congress can make data property").

343. *See* H.L.A. HART, THE CONCEPT OF LAW 185–86 (2d ed. 1994) (describing Legal Positivism to stand for "the simple contention that it is in no sense a necessary truth that laws reproduce or satisfy certain demands of morality"); Anthony J. Sebok, *Misunderstanding Positivism*, 93 MICH. L. REV. 2054, 2061–65 (1995) (describing classical positivism).

344. *See* JOHN AUSTIN, *Lecture I*, *in* THE PROVINCE OF JURISPRUDENCE DETERMINED 18 (Wilfrid E. Rumble ed., 1995) (explaining that law is set by political superiors for political inferiors); Sebok, *supra* note 343, at 2064–65 (describing the "command" and "sources" theories of law).

345. In an important sense, final authority over the domain name system still rests with the United States government, as the U.S. Department of Commerce retains ultimate control over the authoritative root servers for the domain name system as well as ultimate decisionmaking authority over domain name policy. *See supra* note 55 and accompanying text.

346. *See supra* notes 52–55 and accompanying text.

347. *See supra* notes 78–79 and accompanying text.

assigning property rights is hidden behind the arcane processes of ICANN policy-making and private registrar actions. However, while control over the domain name system has been transferred effectively to a not-for-profit corporation, the sovereign function persists.

3. Domain Names as Property.—The concept of *property* has been disaggregated into component rights—typically, the rights to use, exclude, and transfer.[348] When we say that something is Wesley's property, we mean that he has some or all of these rights against other people with respect to that something, in greater or lesser measure and subject to constraints. Holders of domain names have all three principal sticks in the proverbial bundle of property rights.[349] The holder of a domain name has the right to *use* that domain name to refer to the computer of her choice. Moreover, she has the right to do so to the *exclusion* of others by not allowing anyone else to use that domain name.[350] Finally, she has the right to *transfer* that name to another person.[351]

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348. *See* A.M. Honore, *Ownership*, *in* OXFORD ESSAYS IN JURISPRUDENCE 108 (A.G. Guest ed., 1961) (defining the liberal concept of ownership as the right to use property, stop others from using it, lend it, sell it, or leave it by will); Grey, *supra* note 176, at 69; *see also* Cheryl I. Harris, *Whiteness as Property*, 106 HARV. L. REV. 1709, 1724–25 (1993) (describing functional characteristics of property).

349. *See* Xuan-Thao N. Nguyen, *Cyberproperty and Judicial Dissonance: The Trouble with Domain Name Classification*, 10 GEO. MASON L. REV. 183, 190–92 (2001).

350. The Supreme Court has observed that the "power to exclude has traditionally been considered one of the most treasured strands in an owner's bundle of property rights." Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 435 (1982); *see also* Kaiser Aetna v. United States, 444 U.S. 164, 179–80 (1979) (holding that the right to exclude from private property cannot be taken by the government without compensation).

351. While early domain name registration agreements did not envision the transfer of a domain name, most registrars now specifically allow the domain name to be transferred. *See, e.g.*, Tucows, Direct Domain.com, Registration Agreement ¶ 14, *at* http://signup.domaindirect.com/cgi-bin/info.cgi?do=agreement (last visited Sept. 25, 2002) ("You agree that prior to transferring ownership of your domain name to another person (the "Transferee") you shall require the Transferee to agree, in writing to be bound by all the terms and conditions of this Agreement."); 123 Registration.com, 123 Registration Customer Service Agreement ¶ 22, *at* http://www.123registration.com/Help/ServiceAgreement.cfm (last visited Sept. 27, 2002) ("You may transfer your domain name registration to a third party of your choice subject to . . . procedures and conditions"); Address Creation, Domain Registration Agreement, Change of Ownership, *at* http://www.addresscreation.com/regagmt.htm (last visited Sept. 27, 2002) ("You agree that prior to the effectiveness of any transfer of ownership of your domain name to another entity, you will pay Address Creation the then-current amount set forth by Address Creation for the transfer of ownership of a domain name. You further agree that as a condition of any such transfer of ownership of your domain name, the entity to which you seek to transfer your domain name shall agree in writing to be bound by all terms and conditions of this Agreement."); BulkRegister.com, Inc., Registration Agreement 4.1 § 6.1, *at* http://www.bulkregister.com/agreement.phtml (last visited Sept. 25, 2002) ("If you transfer any SLD name, you agree to abide by the policies and procedures relating to transfer of SLD names as may be adopted by us and as in effect from time to time . . . ."); PlanetDomain.com, Domain Name Registration Service Agreement ¶ 5, *at* http://www.planetdomain.com/service_agree_popup.jsp (last visited Oct. 12, 2002) ("In order to transfer a domain name you must be a PlanetDomain member and the transfer must be executed between another PlanetDomain member. The transfer is affected through our online application

Understanding domain names as property accords with how they are treated in practice. Like traditional forms of property, domain names are sold in a secondary market,[352] counted among the assets of a company in bankruptcy,[353] and contested as valuable commodities before courts and arbitral panels.[354] Furthermore, despite some decisions to the contrary,[355] laws themselves often implicitly treat domain names as property. The principal remedy under both the Anti-Cybersquatting Consumer Protection Act[356] and the UDRP[357] is the transfer of the domain name to its "rightful" owner—a property rule.[358] As mentioned earlier, the Anti-Cybersquatting Act allows for actions to be brought in rem against the domain name itself, treating the domain name like the ship of the paradigm in rem case.[359]

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process and must be initiated by the registered user wishing to transfer their domain name to the other party.").

Some registrars state that the registrant's rights under the agreement cannot be assigned, which, if domain names were purely a contractual creation, would suggest that the domain name itself could not be assigned. *See, e.g.*, Network Solutions.com, Service Agreement ¶ 20, *at* http://www.netsol.com/en_US/legal/service-agreement.jhtml (last visited Oct. 12, 2002) ("Your rights under this Agreement are not assignable and any attempt by your creditors to obtain an interest in your rights under this Agreement, whether by attachment, levy, garnishment or otherwise, renders this Agreement voidable at our option."); 123 Registration Customer Service Agreement, *supra*, at ¶ 22 (replicating language from the Network Solutions Service Agreement). However, these registrars (such as Network Solutions, Inc. and 123 Registration) generally do explicitly permit domain name transfers, suggesting that they consider the no-assignment clause as referring to the obligations of the registrar to the registrant, and not to the domain name itself, the latter being transferable.

352. *Secondary Market in Web Names Flourishing*, MILWAUKEE J. SENTINEL, Sept. 3, 2000, at 35D.

353. *See* James W. Boyd, *Identifying, Valuing and Selling Domain Names*, NABTALK: J. NAT'L ASS'N BANKR. TRUSTEES, Fall 2001, at 67 (describing procedures for selling domain names to help satisfy debts owed to creditors in bankruptcy); *SpaceWorks, Inc. to Sell Software and Server Assets at Bankruptcy Auction*, P.R. NEWSWIRE (Washington, D.C.), July 5, 2001 (including the bankrupt company's domain name, Spaceworks.com, as part of the assets to be sold in a bankruptcy auction); John Cook & Marni Leff, *Webvan is Gone, but Idea Lives On*, SEATTLE POST-INTELLIGENCER, July 10, 2001, at A1 (including the HomeGrocer.com domain name in the assets to be sold off in Webvan's Chapter 11 bankruptcy filing); *cf.* Note, Jonathan C. Krisko, *U.C.C. Article 9: Can Domain Names Provide Security for New Economy Businesses?*, 79 N.C. L. REV. 1178 (2001).

354. Domain name disputes arbitrated by WIPO panels can be reviewed online at the website of the World Intellectual Property Organization Arbitration and Mediation Center: http://arbiter.wipo.int/domains/index.html.

355. *See supra* note 337.

356. 15 U.S.C. § 1125(c)–(d) (2002) (permitting a transfer or monetary damages).

357. ICANN UDRP, *supra* note 57, at para. 4(i) (limiting remedies to either a cancellation of the domain name or its transfer to the complainant).

358. On the distinction between property rules and liability rules, see Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092–93 (1972).

359. Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d)(2) (2002); *cf.* United States v. La Vengeance, 3 U.S. (3 Dall.) 297, 300 (1796) (holding that a suit by Don Diego Pintardo, the owner of a captured vessel, against a French privateer ship was a civil in rem action).

Thinking of domain names as property reminds us that the rights inherent in them may be limited in ways that serve society. Rights to property in other domains are rarely absolute;[360] rather, they are usually limited by classic doctrines such as the rule against perpetuities, easements, and nuisance law.[361] Despite a prominent anarchist and libertarian fervor to declare cyberspace a regulation-free world,[362] the designation of a particular space as a person's property does not give that person "sole and despotic dominion" over that space.[363] We should not expect the vesting of a domain name in a particular person to give that person any more absolute rights than she has with other forms of property. Most importantly, thinking of domain names as property forces us to allocate this resource with greater care.[364] The current approach seems content to relegate the assignment of rights in this resource to the obscure, undemocratic ICANN process. Once we understand domain names as property, we may be less comfortable with leaving decisions about entitlements to such an authority, seeking instead either to make the authority more transparent and democratic or to transfer decisionmaking to a different process entirely.

Identifying domain names as property will trouble many people who worry about the excessive commodification of different aspects of our lives.[365] Drawing upon Margaret Jane Radin's work,[366] these scholars argue that propertization will interfere with freedom and that the rhetoric of the

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360. Margaret Jane Radin points out that some scholars see property as "an all-or-nothing concept," but argues that such a view is mistaken. RADIN, *supra* note 148, at 104; *see also* LESSIG, CODE, *supra* note 13, at 131 (noting that "property rights are never absolute").

361. *See generally* Joel C. Dobris, *The Death of the Rule Against Perpetuities, or the RAP Has No Friends: An Essay*, 35 REAL PROP., PROB. & TR. J. 601 (discussing the modern tendency to sanction perpetuities instead of destroying them).

362. *See* John Perry Barlow, *A Declaration of the Independence of Cyberspace*, THE HUMANIST, May/June 1996, at 18, *available at* http://www.eff.org/~barlow/Declaration-Final.html (declaring that legal concepts such as property law do not apply to cyberspace); David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367 (1996) (advocating the self-regulation of cyberspace as a jurisdiction independent of territorial sovereigns); Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1998) (criticizing the anarchist and libertarian philosophy of many of the most fervent Internet supporters).

363. The modern understanding of property disaggregated into a bundle of severable and qualifiable rights rejects Blackstone's view of property as "sole and despotic dominion." 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 2 (Univ. of Chicago Press 1979) (1766); *see also* Grey, *supra* note 176.

364. Contract law is not, of course, devoid of social constraints, evident most pointedly in the doctrine of unconscionability.

365. Margaret Jane Radin, *Incomplete Commodification in the Computerized World*, *in* THE COMMODIFICATION OF INFORMATION 3, 19 (Niva Elkin-Koren & Neil Weinstock Netanel eds., 2002).

366. Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1885 (1987) (arguing that "universal market rhetoric does violence to our conception of human flourishing").

market that follows propertization will coarsen our lives.[367] Others express concern about the increasing and excessive propertization of things heretofore in the commons.[368] Mark Lemley, for example, laments the propertization of trademarks, giving trademark holders more rights than trademark economics can justify.[369] While Lemley convincingly demonstrates that courts and Congress have expanded trademark rights unwisely,[370] that seems to be less a problem of propertization than one of incorrectly setting the rules governing property. For example, if legislatures and courts declared that homeowners could prevent migrating birds from flying overhead, that would not lead us to conclude that homeowners should not have property, but only that the property rights they have should not include the right to prevent such migration. The rhetoric of property, as Lemley reminds us, is often used to expand the holder's rights, but propertization itself does not require this.

B. Commons v. Privatization

Having identified domain names as property, we need to decide to whom such property should be awarded. But why give domain names to anyone at all? Why not preserve them in a commons, open to all to use?[371]

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367. *See, e.g.*, DEBORA J. HALBERT, INTELLECTUAL PROPERTY IN THE INFORMATION AGE: THE POLITICS OF EXPANDING OWNERSHIP RIGHTS (1999) (arguing that copyright law is no longer useful and that it is especially detrimental in the digital environment); SETH SHULMAN, OWNING THE FUTURE (1999) (positing arguments for a public debate on the moral implications of intellectual property).

368. Lawrence Lessig, Reclaiming a Commons, Keynote Address at the Berkman Center's "Building a Digital Commons" 3–4 (May 20, 1999), *available at* http://www.cyber.law.harvard.edu/events/lessigkeynote.pdf (arguing that limiting the free exchange of ideas is contrary to the Founders' intent and to a healthy economy); Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 357 (1999) (proposing that the government should generally refrain from applying intellectual property rights absent a compelling government interest furthered by the least restrictive means); Yochai Benkler, *Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment*, 11 HARV. J.L. & TECH. 287, 290 (1998) (discussing the regulation of wireless transmissions as a public commons); David Lange, *Recognizing the Public Domain*, L. & CONTEMP. PROBS., Autumn 1981, at 147; Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1990).

369. Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1688 (1999) [hereinafter Lemley, *Common Sense*]; Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 TEXAS L. REV. 873, 902 (1997).

370. The unwise expansion of trademark holders' rights is not just an American phenomenon. Consider the recent case where Deutsche Telekom warned a German online book company to cease using the color magenta in its advertising on the ground that Deutsche Telekom had trademarked that color as used in the online services sector. *See* Boris Groendahl, *Magenta Makes DT See Red*, THE INDUSTRY STANDARD, July 27, 2001, *available at* http://www.thestandard.com/article/0,1902,28301,00.html.

371. Carol Rose observes that certain attributes make some kinds of resources intrinsically public, or at least ill-suited for private ownership. *See generally* Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 717–20 (1986) (noting that under classical economic theory, there are two exceptions to the general rule favoring private and exclusive property rights: plenteous goods and public goods). While domain

Indeed, as described above, a number of scholars have warned against the shrinking of the intellectual commons as human expressions are increasingly commodified and privatized.[372] They worry that free expression, creativity, and progress will be stifled by the privatization of language and ideas. "Unless we are careful," Mark Lemley cautions, "we may end up in a world in which every thing, every idea, and every word is owned."[373]

But preserving domain names in the commons would prove impractical. If a domain name were open to all comers, it would convert domain names into electronic yellow pages, listing all who wanted to have their names placed there.[374] A commons approach would transform a domain name from a destination to an intermediate point in the search to find the site a websurfer was trying to reach, adding an extra step to the process of reaching the desired site.[375] Moreover, the intermediate point reached by typing a domain name would be, like many yellow pages, difficult to traverse easily. Organizing the main site according to the usual criteria—alphabetical or chronological[376]—would likely obscure the most sought-after sites.[377] Competitors of any sought-after site would likely crowd the principal domain name listing the site to offer their own versions, thereby adding confusion to the web search. Owners of famous trademarks would face the exploitation of their marks by competitors. Moreover, it seems unlikely that we will see domain names lose entirely their role as identifiers of specific sites given their entrenchment in e-commerce.

A domain name commons would often result in a "tragic" overexploitation of the domain name, with the benefit gained by an

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names are plenteous in the abstract, the most useful ones are quite scarce. In addition, domain names are not public goods because they are neither nonrivalrous nor nonexcludable.

372. *See* Radin, *supra* note 365; Lange, *supra* note 368, at 147 (arguing that intellectual property has been allowed to grow recklessly).

373. Lemley, *Common Sense*, *supra* note 369, at 1715.

374. Of course, many obscure or highly specific domain names would find only one user. Sites that prove attractive only to one person do not present much of a problem. The attention here is on the more sought-after sites, the ones over which controversies rage and in which secondary market trading occurs.

375. Many search engines contain listings of sites on many different subjects. *See, e.g.*, http://www.yahoo.com; http://www.webcrawler.com.

376. Alphabetical organization might be by name, or by geographical location and then by name within each location. Chronological organization might be by date of corporate organization or date of request to be listed on the website.

377. One possible way to make such a site more user-friendly would be to allow people to pay for increased visibility (as occurs in most search engines). Such a system would allow richer enterprises to be featured more prominently. This system would benefit whoever receives the proceeds of the listing activity. More importantly, selling locations on the domain name would effectively privatize the domain name site—exactly what a commons regime is supposed to avoid. One additional possibility might avoid these problems yet still make a domain name commons somewhat more user-friendly. The list could be organized by the number of hits each item in the list had received previously. Such an approach would reflect the popularity of each listed site, placing the most popular site at the top.

additional domain name user outweighed by the reduction in productivity of that domain name for other users.[378] At times, communal traditions among small, well-identified groups of individuals with multiplex relations among each other may avoid a commons tragedy,[379] but such conditions are unlikely to prevail in the impersonal and often anonymous world of cyberspace.

The value of a domain name arises principally because of its commodification and subsequent privatization. Without privatization, the name would likely be over-trodden, becoming merely a yellow pages section for the Internet.

C. The Irrelevance of Initial Entitlements

"So what?" the economist might ask.[380] The initial allocation of domain names should prove irrelevant to the larger societal goal of maximizing efficiency and aggregate social welfare, at least under conditions of minimal transaction costs.[381] Transaction costs of transferring domain names should indeed be negligible, with almost zero search costs and low bargaining and enforcement costs. Domain names would, accordingly, seem to offer an ideal case for the application of the Coase Theorem.[382] Applying that Theorem, we should conclude that the only important values for the law are specifying property rights in domain names and enforcing contractual bargains with respect to them. Pareto-superior transfers will ensure that any misallocated domain names make their way to their highest-valued use. Reforming the initial allocation regime is unnecessary since the invisible

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378. *Cf.* Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968).

379. *See generally* ROBERT ELLICKSON, ORDER WITHOUT LAW (1991) (describing, through the example of cattle ranchers in Shasta County, California, the possibility of non-tragic commons where repeat and multiplex relations among members of a small group allow for dispute resolution without reference to formal legal norms).

380. I recognize the caricature in this statement. Economists are quite diverse, and indeed many of today's most well-respected economists would not say that the initial entitlements are irrelevant. My focus is on the foundational work of Ronald Coase on the relationship between legal entitlement and efficient outcomes. For an illustration of this relationship, consider the following:

> Whether a newly discovered cave belongs to the man who discovered it, the man on whose land the entrance to the cave is located, or the man who owns the surface under which the cave is situated is no doubt dependent on the law of property. But the law merely determines the person with whom it is necessary to make a contract to obtain the use of the cave. Whether the cave is used for storing bank records, as a natural gas reservoir, or for growing mushrooms depends, not on the law of property, but on whether the bank, the natural gas corporation, or the mushroom concern will pay the most in order to be able to use the cave.

Coase, *supra* note 119, at 25.

381. *Cf.* POSNER, *supra* note 155, at 52 (noting, with regard to broadcast frequencies, that "failure to assign the right to the applicant who values it the most is only a transitory inefficiency").

382. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960); *see also* Guido Calabresi, *Transaction Costs, Resource Allocation and Liability Rules—A Comment*, 11 J.L. & ECON. 67, 67–68 (1968) (describing the Coase Theorem as predicting that "if one assumes rationality, no transaction costs, and no legal impediments to bargaining, *all* misallocations of resources would be fully cured in the market by bargains").

hand of the market will make everything right.[383] America.com will go to its most efficient use. Disney.com will find its rightful owner.

In this Part, I consider and reject this claim. Economic literature has come to recognize certain failures in the Coase Theorem's prediction of an efficient outcome through private bargains. Game theory, information economics, and behavioral law and economics have pointed out reasons why that prediction is overly optimistic. Indeed, I argue that we have special cause to think that, with respect to domain names, inefficient initial allocations will often persist.

Much of the criticism to follow is summed up in the conclusion drawn by prominent scholars who have analyzed the failure of Russian privatization: "Call it the triumph of Hayek over Coase—of Hayekian respect for endogenously developed traditions over the abstract promise of the Coase-influenced mass privatization schemes."[384] The single-minded reliance on a legal regime consisting of private property and free contract neglects important facts of everyday life. The property rights theorists miss the importance of institutions, history, and complex human behavior.[385] Even in a setting of remarkably low transaction costs, the market mechanism may not achieve efficiency.

Transferring a domain name would seem to present the classic case of minimal transaction costs.[386] A quick electronic search of the domain name registry reveals who owns a particular domain name, providing the owner's email and phone contact information.[387] All one needs to do in order to make an offer on a domain name is email a dollar figure or pick up the phone. The transfer mechanics are not much more complicated, although an escrow

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383. In this way, the Coase Theorem helps validate the first possession rule, as it can now be defended as producing an efficient outcome.

384. Bernard Black et al., *Russian Privatization and Corporate Governance: What Went Wrong?*, 52 STAN. L. REV. 1731, 1802 (2000). *See generally* FRIEDRICH A. HAYEK, 1 LAW, LEGISLATION AND LIBERTY: RULES AND ORDER 11 (1973) (describing institutions necessary for a successful society as a result of customs and habits). *But cf.* Radin & Wagner, *supra* note 362, at 1298 (arguing that a Hayekian "free-for-all" ordering system, guided by custom, may not be viable).

385. *See, e.g.*, Jacob M. Schlesinger, *The Web: Friend or Foe of Capitalism?*, WALL ST. J., July 24, 2000, at A1 (quoting Ronald Coase as saying, "The functioning of an economy depends on the definition of property rights and their enforcement").

386. Robert Cooter and Thomas Ulen disaggregate transaction costs into search costs (the costs of finding a buyer or seller), bargaining costs (costs of negotiating and drafting an agreement), and enforcement costs (costs of monitoring and ensuring performance). COOTER & ULEN, *supra* note 195, at 86.

387. A search of sites such as www.snapnames.com reveals the holder of any particular domain name, including email, phone, and address. Recently, some have questioned the ability to access account holder information as a threat to privacy. *See* World Intellectual Property Organization, *The Management of Internet Names and Addresses: Intellectual Property Issues*, *at* http://wipo2.wipo.int/process1/report/finalreport.html (Apr. 30, 1999) (noting the "concerns of those who consider that the public availability of contact details may lead to intrusions of privacy"). However, the important role that the domain name registry plays in the domain name system requires that it remain public.

agent may be advisable.[388] Monitoring the transfer is nearly effortless, since another quick electronic search of the domain name registry will reveal whether the transfer has been effected.

In such a classic case of minimal transaction costs, the Coase Theorem predicts that voluntary bargaining will efficiently reallocate any initial endowment of resources.[389] Thus, government intervention (other than enforcement of property and contract rights) is not necessary to achieve an economically optimal result.[390] An active secondary market in domain names[391] seems to confirm the central intuition behind the Coase Theorem: people will not let the legal entitlement lie where the law initially assigned it if someone else values it more.

This presents too rosy a picture. Non-transaction-cost barriers to the application of the Coase Theorem may interfere with the efficient reallocation of resources. Such barriers to market exchange include individual strategic actions that interfere with efficient bargains and behavioral phenomena that fall outside standard economic assumptions of rationality.[392]

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388. Escrow services are available on the web to guarantee that each party in the transfer lives up to its bargain. GreatDomains.com, for example, offers its services for a fee of 1% of the sale price, with a minimum of $500. GreatDomains.com, Private Transaction Request Form, *at* http://www.greatdomains.com (last visited Sept. 24, 2002). TransferDomain.com offers the service for $99. TransferDomain.com, Seller Agreement and Form, *at* http://www.transferdomain.com/agreement-Seller.htm (last visited Sept. 24, 2002). Capitalizing perhaps on its prime name, Escrow.com offers the service for a fee between 0.85% and 3.0% of the selling price. Escrow.com, Escrow Fees & Calculator, *at* http://www.escrow.com/support/calculator.asp (last visited Sept. 24, 2002).

389. *See* PETER C. ORDESHOOK, GAME THEORY AND POLITICAL THEORY 353 (1988) (discussing the Coase Theorem). This result is premised on certain conditions in addition to low transaction costs, primarily the firm establishment of property rights, the existence of a mechanism for enforcing contracts, and the availability of "a freely transferable numeraire good such as money." *Id*.

390. The use of the Coase Theorem to defend the current allocation system would surprise that system's greatest proponents. While the Theorem would rely upon private sales as the engine to correct initial misallocations, the arbitrators and judges who implement the UDRP and ACPA have often exhibited a strong hostility toward the sale of domain names, at least when the domain name employs a trademark. The profit-seeking goal is viewed as evidence of the "bad faith" necessary to state a claim under either the UDRP or the ACPA. *See, e.g.*, Süd-Chemie AG v. tonsil.com (F.R.G. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0376 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0376.html (noting that the respondent had recognized the economic value of domain names); E. & J. Gallo Winery v. Spider Webs Ltd., 129 F. Supp. 2d 1033, 1046–47 (S.D. Tex. 2001) (holding that the defendant's view of a domain name as a type of fungible "real estate" was evidence of bad faith).

391. For examples of sites where domain names are regularly traded, see http://www.GreatDomains.com; http://www.eBay.com; http://www.YahooAuctions.com.

392. Some authors define transaction costs broadly to include essentially anything that interferes with the Coase Theorem, including complications arising from individual irrationality and any behavior that interferes with efficient bargaining. Douglas W. Allen, *What are Transaction Costs?* 14 RES. L. & ECON. 1, 3 (1991) (asserting that transaction costs include any cost "to establish and maintain property rights," a definition that would embrace strategic behavior, rent-seeking, and virtually any cost associated with bargaining failure); Jeanne L. Schroeder, *The End of the Market: A Psychoanalysis of Law and Economics*, 112 HARV. L. REV. 483, 537, 542 (1998);

Strategic bargaining, loss aversion, and path dependence offer three classes of observable behavior not captured by the usual statement of the Coase Theorem.

1. Strategic Bargaining.—Kenneth Arrow describes the problem created by strategic bargaining.[393] He uses the textbook example of the factory owner and the nearby landowners. The Coase Theorem famously holds that whether the factory owner has the right to pollute or whether the landowners have the right to clean air does not matter because the parties will simply bargain to achieve the desired result, given negligible transaction costs. Arrow questions this claim. He begins by making the realistic assumption that the parties do not know how much the other party values the right to pollute or to have clean air.[394] Suppose also that the law grants landowners the right to clean air. If the factory owner makes an offer to the landowners to purchase that right, some landowners might reject it as below their reservation price (the lowest price they are willing to accept to allow the factory owner the right to pollute).[395] That itself does not present a problem for bargaining because the factory owner can always increase his offer. However, as Arrow notes, "a more serious problem is that a landowner might reject the offer even if it is above his reservation price, to convey the idea that it is still higher, for he knows that the factory owner cannot be sure of the deception."[396] Seeking to "garner for himself the entire surplus" in the transaction, each party has an incentive not to reveal a price that may be

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Richard O. Zerbe, Jr., *The Problem of Social Cost in Retrospect*, 2 RES. L. & ECON. 83, 86 (1980) (discussing broader definitions of transaction costs including individual bargaining tactics).

393. *See* Kenneth J. Arrow, *The Property Rights Doctrine and Demand Revelation Under Incomplete Information*, *in* ECONOMICS AND HUMAN WELFARE 23 (M. Boskin ed., 1979), *reprinted in* KENNETH J. ARROW, THE ECONOMICS OF INFORMATION 216 (1984).

394. *Id.* at 217. This contrasts with the traditional neoclassical economic assumption of perfect information, necessary for conditions of perfect competition. Note that one scholar includes "perfect information" as being a prerequisite to the Coase Theorem and, indeed, defines the Theorem in that way: "In a world of perfect competition, perfect information, and zero transaction costs, the allocation of resources will be efficient . . . ." Richard O. Zerbe, *The Problem of Social Cost: Fifteen Years Later*, *in* THEORY AND MEASUREMENT OF ECONOMIC EXTERNALITIES 29, 29 (Steven A.Y. Lin ed., 1976). One possible response would be to classify the costs of obtaining the true personal valuation of the counterparty as among transaction costs, but this seems a move that runs against the kinds of things normally considered "transaction costs." The "cost" is not a result of external factors but is intentionally imposed by the parties themselves as a strategic ploy. Informational transaction costs, such as search costs, are generally the result of exogenous factors, such as a hopeful seller being unable to advertise cheaply information to prospective buyers. Here, we assume that obstinate parties are facing zero transaction costs and could, if in a more generous mood, exchange information at will.

395. *See* DONALD W. MOFFAT, ECONOMICS DICTIONARY 257 (2d ed. 1983) (defining reservation price as "[t]he highest price which a seller will *not* accept; that seller *will* accept if the offered price is raised incrementally").

396. ARROW, *supra* note 393, at 218.

mutually acceptable in the hopes of striking a better bargain.[397] Because of this defect, we cannot say with certainty that the parties will indeed reach an efficient bargain.[398] When both parties to a possible exchange have private reservation values, bargaining will not necessarily result in an efficient outcome.[399]

Thus, even when parties recognize exchanges that may be mutually beneficial, they still face the problem of dividing the potential gains from trade. As Robert Cooter writes, that problem is "a source of instability that can lead to bargaining breakdowns."[400] Haggling over the division of the potential gains from trade can create problems for the Coase Theorem's optimistic reliance on purely voluntary exchange.[401] There is no saving economic theory guaranteeing that rational, self-interested individuals will agree on an efficient exchange without some external institutional arrangement.[402] Coase concedes this, but he argues that "the proportion of cases in which no agreement will be reached is small."[403]

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397. *Id.* The standard assumption of self-interested economic rationality contains the possibility of noncooperative behavior among parties facing potential gains from trade. *See* G.A. Mumey, *The "Coase Theorem": A Reexamination*, 85 Q.J. ECON. 718, 723 (1971) (stating that "[t]he same avarice that fuels the existing voluntary economic system could, unchecked, turn inward and undo that system's accomplishments").

398. Relying on a proof by Allan Gibbard and M.A. Satterthwaite, Arrow observes that if the parties do not know each others' preferences, then no mechanism can be devised that would guarantee that an efficient bargain would be struck between them. ARROW, *supra* note 393, at 219. *See also* A. Gibbard, *Manipulation of Voting Schemes: A General Result*, 41 ECONOMETRICA 587 (1973); Mark Allen Satterthwaite, *Strategy-Proofness and Arrow's Conditions: Existence and Correspondence Theorems for Voting Procedures and Social Welfare Functions*, 10 J. ECON. THEORY 187, 187–88 (1975) (discussing voting procedures and concluding that any strategy-proof voting procedure would have to give one voter absolute power over the transaction).

399. Roger B. Myerson & Mark A. Satterthwaite, *Efficient Mechanisms for Bilateral Trading*, 29 J. ECON. THEORY 265, 266 (1983).

400. Robert D. Cooter & Daniel L. Rubenfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. ECON. LITERATURE 1067, 1078 (1989) (discussing strategic behavior as a barrier to bargaining in the context of out-of-court settlement of legal disputes).

401. *See* DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 219–24 (1994) (discussing difficulties in game theoretical modeling of the division of gains from trade); Robert Cooter, *The Cost of Coase*, J. LEGAL STUD., Jan. 1982, at 1, 17 (stating that "[t]he distribution problem is unsolvable by rational players").

402. This proposition has been recognized and cited in a variety of analyses. *See, e.g.*, Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 653 (1998) (citing Cooter in analysis of slow growth of Communist-to-free-market transitional economies); Robert P. Inman & Daniel L. Rubinfeld, *Making Sense of the Antitrust State-Action Doctrine: Balancing Political Participation and Economic Efficiency in Regulatory Federalism*, 75 TEXAS L. REV. 1203, 1224 (1997) (applying Cooter in a discussion of federalism and business regulation); Juliet P. Krotritsky, *Bargaining with Uncertainty, Moral Hazard, and Sunk Costs: A Default Rule for Precontractual Negotiations*, 44 HASTINGS L.J. 621, 632 (1993) (recognizing Cooter in an analysis of nonstrategic bargaining barriers to contract formation); Lemley, *supra* note 156, at 1058–59 (citing Cooter in an analysis of optimal intellectual property laws); Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601, 622 (1998) (recognizing that Cooter's approach to bargaining failure is based on the inability to divide gains from trade, even under low transaction costs); Dale A. Whitman, *Mortgage*

Certain exchanges might also fail because rational parties think beyond the confines of any particular negotiation. Rational parties may develop general, long-run strategies that shape their overall bargaining behavior.[404] Game theoretical models of real-world bargaining generally assume that parties must predict "probabilistically" each other's true preferences.[405] In the absence of specific information, parties may find it cost-effective simply to develop rules of thumb to deal with situations on the whole. For example, as a general rule, "[s]ellers tend to overstate the value they place on the bargained-for item, while buyers tend to understate their desire to purchase it. As a result . . . parties may fail to detect and exploit a mutually beneficial trade, and even when they can it is usually after considerable and costly delay."[406]

An unusual result of the combination of potential gains from trade and rational, self-interested behavior is that parties may intentionally frustrate otherwise beneficial transactions in order to build a reputation as hard bargainers. A seller, for example, who refuses an otherwise beneficial trade signals a strong, stable preference (even if untrue) to other potential buyers. This reputation-building, although it appears irrational given the circumstances of a particular trade, is designed to make negotiations more fruitful in the long run.[407]

Prepayment Clauses: An Economic and Legal Analysis, 40 UCLA L. REV. 851, 879 (1993) (applying Cooter in an analysis of real estate mortgage contracts).

403. R.H. COASE, THE FIRM, THE MARKET, AND THE LAW 161 (1988). *But cf.* Linda Babcock & George Loewenstein, *Explaining Bargaining Impasse: The Role of Self-Serving Biases*, *in* BEHAVIORAL LAW AND ECONOMICS 355, 355 (Cass Sunstein ed., 2000) (observing that "[t]he consequences of impasse are evident in the amount of private and public resources spent on civil litigation, the costs of labor unrest, the psychic and pecuniary wounds of domestic strife, and in clashes between religious, ethnic, and regional groups").

404. Cooter, *supra* note 401, at 28 (noting that bargaining failures "occur because each player's strategy is best against opponents on average, but not best against every individual opponent").

405. Avery Katz, *The Strategic Structure of Offer and Acceptance: Game Theory and the Law of Contract Formation*, 89 MICH. L. REV. 215, 233 (1990); *see also* BAIRD ET AL., *supra* note 401, at 122–23 (discussing the problem of private and asymmetric information in bargaining).

406. Ian Ayers & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1030 (1995); *see also* Peter Knez et al., *Individual Rationality, Market Rationality, and Value Estimation*, AM. ECON. REV., May 1985, at 397, 397 (discussing sellers as overstating a minimum acceptable price and buyers as understating a maximum possible bid as a general strategy of bargaining). For a discussion of heuristic rules and "rules of thumb" leading to suboptimal choices in specific situations, see Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1069 (2000) (discussing generally the limits of traditional economic assumptions about rationality and suggesting an approach drawing on observed behavior and knowledge from the social sciences outside of economics).

407. *See* BAIRD ET AL., *supra* note 401, at 220 (noting that parties forgo beneficial trades to build credibility in future negotiations); ABHINAY MUTHOO, BARGAINING THEORY WITH APPLICATIONS 327–31 (1999) (discussing the significant role of reputation on bargaining and illustrating with a simple bargaining model); ORDESHOOK, *supra* note 389, at 451–52 (discussing the general role of reputation-building in noncooperative games); David Kreps & Robert Wilson, *Reputation and Imperfect Information*, 27 J. ECON. THEORY 253 (1982) (generally discussing the

Thus, because of strategic bargaining, we see that the legal entitlement does indeed matter.[408] A misallocated resource may continue to rest with the person who values it less than a potential buyer. There is little reason to presume that domain name buyers and sellers will be immune to strategic actions. To the contrary, there is reason to suppose that strategic behavior will be quite common with respect to domain names. Given the uncertainty that surrounds valuations in e-commerce, it is easy to imagine both parties coming to wildly different assessments of the price that would divide reasonably the gains from trade.[409] It seems quite likely that the buyer's valuation and the seller's valuation will be private information to which it will be difficult for the other side even to assign a probability distribution.

A hypothetical illustration might be helpful. Having registered Latina.com, David Jones now seeks to sell it. His two highest bidders (both for $20,000) are a person who wants to use the domain name to present pornography[410] and Latina Magazine, which wants to establish an online edition (and keep the domain name out of the hands of pornographers). While Jones' reservation price is only $100, and the site is almost worthless to him as he never plans to develop it himself, he rejects even the highest offers he receives. He believes that both of the highest bidders secretly value the domain name much higher than $20,000, and he wants to extract that value as fully as possible. The two potential buyers, on the other hand, believe that Jones should be more than happy with the $20,000 offer, since they know he paid only $50 for the name, being the original registrant. While they each increase their offers, they may never satisfy Jones. Jones may not agree to sell to either potential buyer, and Latina.com may remain undeveloped. This prediction is borne out in cyberspace. Many of the most

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important role of credibility in bargaining relations); *see also* Katz, *supra* note 405, at 225–26 (discussing the building of credibility as part of strategic bargaining, including occasionally carrying out "bluffs" as part of overall strategy); Eric A. Posner, *A Theory of Contract Law Under Conditions of Radical Judicial Error*, 94 NW. U. L. REV. 749, 765 (2000) (discussing the strategy of reputation-building among individual buyers and sellers); David B. Spence & Lekha Gopalakrishnan, *Bargaining Theory and Regulatory Reform: The Political Logic of Inefficient Regulation*, 53 VAND. L. REV. 599, 633 (2000) (applying reputation-effect to an analysis of strategic bargaining behavior among special-interest groups maximizing long-run payoffs).

408. *See, e.g.*, Joseph Farrell, *Information and the Coase Theorem*, J. ECON. PERSPECTIVES, Fall 1987, at 113, 122–23 (using mathematics to demonstrate that property rights affect incentives to bargain); Drew Fudenberg & Jean Tirole, *Sequential Bargaining with Incomplete Information*, 50 REV. ECON. STUD. 221, 221–23, 239 (1983) (concluding that incomplete information in a negotiation increases efficiency); Katz, *supra* note 405, at 225–32 (discussing generally the problem of strategic behavior); Russell Korobkin, *The Status Quo Bias and Contract Default Rules*, 83 CORNELL L. REV. 608, 617–21 (1998) (discussing strategic bargaining generally and as the primary cause of inefficient contracts).

409. Perhaps the ease of communication with respect to domain names will also increase the probability of strategic behavior. Cooter, *supra* note 401, at 28 (suggesting that "it is cheaper to engage in strategic behavior when communication is inexpensive").

410. This is not as fanciful as it might seem. Asian.org is a pornography site.

valuable domain names remain undeveloped, languishing in the hands of those who refuse to sell because of their desire to extract more of the gains from trade.

2. Loss Aversion and Endowment Effect.—A standard economic assumption is that, all other things being equal, individuals form their preferences without regard to personal ownership of a resource.[411] Bargaining under the Coase Theorem relies on the assumption that the amount that people are willing to pay for an entitlement is roughly the same as the amount they are willing to accept to give up that same entitlement.[412] However, a large body of experimental data suggests a different result.[413] The phenomenon that people apparently value losses more than equivalent gains is called loss aversion, which encompasses the related phenomena of the endowment effect and status quo bias.[414]

The endowment effect refers to the observation that people demand more money to give up a possession than they would be willing to pay to

411. "That is, if an individual owns *x* and is indifferent between keeping it and trading it for *y*, then when owning *y* the individual should be indifferent about trading it for *x*." Daniel Kahneman et al., *Anomalies: The Endowment Effect, Loss Aversion, and the Status Quo Bias*, J. ECON. PERSP., Winter 1991, at 193, 196 (discussing loss aversion and presenting experimental evidence supporting endowment effects and status quo biases). The derivation of neoclassical indifference is dependent on this logic: "One of the first lessons in microeconomics is that two indifference curves can never intersect. This result depends on the implicit assumption that indifference curves are reversible . . . . If loss aversion is present, however, this reversibility will no longer hold." *Id.*; *see also* Herbert Hovenkamp, *Legal Policy and the Endowment Effect*, 20 J. LEGAL STUD. 225, 225–26 (1991) (discussing the endowment effect and the standard economic assumptions that the effect contradicts). As Knetsch points out, in the presence of loss aversion, an indifference curve would have to consider the direction of exchange. Jack L. Knetsch, *The Endowment Effect and Evidence of Nonreversible Indifference Curves*, 79 AM. ECON. REV. 1277, 1278–79 (1989) (describing experimental results); *see also* Patrick W. Sileo, *Intransitivity of Indifference, Strong Monotonicity, and the Endowment Effect*, 66 J. ECON. THEORY 198, 207–08 (1995) (describing the endowment effect as contradicting the important classical economic assumption of symmetry of preferences).

412. Hovenkamp shows that the equivalency of "willingness to pay" and "willingness to accept" is essential to many fundamental economic tools, including the derivation of indifference curves and basic notions of allocative efficiency and market equilibrium. *See* Hovenkamp, *supra* note 411, at 225–27 (discussing standard economic assumptions violated by the endowment effect).

413. *See, e.g.*, Kahneman et al., *supra* note 411, at 196 (describing loss aversion and presenting a review of experiments); Knetsch, *supra* note 411, at 1277–82 (citing evidence of loss aversion from a wide variety of experiments and describing loss aversion as the irreversibility of indifference curves). Kahneman and his co-authors provide evidence that the endowment effect is not merely the result of mistakes which would be eliminated by experience, training, or market discipline. Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325, 1346 (1990) (describing robust experimental evidence of loss aversion). "[T]he findings support an alternative view of endowment effects and loss aversion as fundamental characteristics of preferences." *Id.*

414. Loss aversion occurs when "the disutility of giving up an object is greater than the utility associated with acquiring it." Kahneman et al., *supra* note 411, at 194. "Empirical estimates of loss aversion are typically in the neighborhood of 2, meaning that the disutility of giving something up is twice as great as the utility of acquiring it." Shlomo Benartzi & Richard H. Thaler, *Myopic Loss Aversion and the Equity Premium Puzzle*, 110 Q.J. ECON. 73, 74 (1995).

acquire it.[415] The status quo bias arises as a more general testable implication of loss aversion—a general preference for the status quo.[416] Loss aversion reduces the number of mutually advantageous trades that might occur.[417] The overall result of loss aversion is that bargaining in the market may be slow to correct a general bias towards the initial endowment of resources, challenging a principal result of the Coase Theorem.[418]

Domain names show a large endowment effect. An individual who registers "Law.com" may not have been willing to pay $500,000 for the domain name, but she may only part with it for that amount, confident that someone out there will be willing to pay that much in the future. This reflects the endowment effect, not simply the market appreciation of an asset, because the individual would not herself be willing to pay the amount she demands to part with the asset. Therefore, the endowment effect will reduce the number of domain name trades that occur privately.

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415. *See* Kahneman et al., *supra* note 411, at 194 (examining the relationship between the endowment effect, the status quo bias, and loss aversion); Mark Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 S. CAL. L. REV. 669, 691–93 (1979) (analyzing refusal of consumers to ignore sunk-costs or close transactions before the full value has been obtained); Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39–40 (1980) (defining the "endowment effect").

416. Loss aversion implies that individuals value potential losses greater than potential gains, creating a preference for the current state of affairs "because the disadvantages of leaving it loom larger than advantages." Kahneman et al., *supra* note 411, at 197–98; *see also* Robert A. Hillman, *The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages*, 85 CORNELL L. REV. 717, 721–22 (2000) (describing the status quo bias and the endowment effect as affecting the formation of preferences and advocating the need to incorporate status quo bias into legal analysis); William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7 (1988) (defining "status quo bias").

417. Kahneman et al., *supra* note 413, at 1344 ("This is not to say that Pareto-optimal trades will not take place. Rather, there are simply fewer mutually advantageous exchanges possible, and so the volume of trade is lower than it otherwise would be."). *See also* Knetsch, *supra* note 411, at 1282–83 (discussing the effect of irreversibility of indifference curves as reducing market exchange); Jeffrey J. Rachlinski & Forest Jourden, *Remedies and the Psychology of Ownership*, 51 VAND. L. REV. 1541, 1552 (1998) (discussing the endowment effect as resulting in a reduced number of trades).

418. Many law and economics scholars have noted that loss aversion is a problem for efficient bargaining and the Coase Theorem. "[E]ven when transaction costs and wealth effects are known to be zero, initial entitlements alter the final allocation of resources." Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1484 (1998) (discussing loss aversion and possible theoretical explanations for the endowment effect); *see also* Elizabeth Hoffman & Matthew L. Spitzer, *Willingness to Pay vs. Willingness to Accept: Legal and Economic Implications*, 71 WASH. U. L.Q. 59, 64–65 (1993) (describing loss aversion as problematic for Coasean reallocation); Kahneman et al., *supra* note 413, at 194 (reporting several experiments demonstrating that initial entitlements affect economic valuation and influence bargained-for outcomes, in contradiction to the Coase Theorem); Rachlinski & Jourden, *supra* note 417, at 1544 ("The endowment effect itself implies that a fundamental aspect of the Coase Theorem is wrong . . . ."); Cass R. Sunstein, *Television and the Public Interest*, 88 CALIF. L. REV. 499, 546 (2000) (noting that the initial endowment of resources tends to "stick").

3. Path Dependence.—History matters.[419] The initial allocation of resources gains importance because of a phenomenon that economists label "path dependence." Path dependence refers to circumstances in which "the consequence of small events and chance circumstances can determine solutions that, once they prevail, lead one to a particular path."[420] Essentially, both suppliers and consumers become accustomed, or committed, to technologies and institutions over time, exhibiting inflexibility or lock-in.[421] Such commitments at an early stage may eventually result in market dominance over time.[422] The result is that allocations of resources may become ingrained and persist over time, even if they are inefficient.[423] Thus, in addition to individual behavior which frustrates market exchange, larger market and institutional behavior also contributes to the conclusion that a nonoptimal initial allocation of resources may not be efficiently reallocated by the market alone. Viewed in another way, path dependence might mean that efficient possibilities in the future are reduced, and the utility-possibility frontier diminished, because of the choices and commitments of the past.

Domain names exhibit path dependence because the use of a domain name for one purpose itself increases the value of that use of the domain name, as users come to associate that name with that particular use and as links are established to that name from other sites. Suppose that CyberSoft, Inc., a small software company, registers Cyber.com in 1995 and uses it to sell computer anti-virus software. If another person wants to purchase the name in order to offer perhaps an Internet marketplace or an Internet magazine, that person must compensate CyberSoft for the fact that many of its customers remember its web location as Cyber.com. Path dependence will reduce, but not eliminate, the likelihood of such a trade occurring. Just as in real-world homes, there is an inertia in cyber residences. This inertia results in a net social loss when compared with a regime that allocated domain names efficiently in the first instance.

To summarize, law and economics literature shows that non-transaction-cost barriers may frustrate the application of the Coase Theorem. Even under the prescribed conditions for applying the Coase Theorem, non-

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419. Stephen E. Margolis & S.J. Liebowitz, *Path Dependence*, *in* 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW 17 (1998) (summarizing claims regarding path dependence as amounting to "some version of 'history matters'").

420. DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE 93–94 (1990) (discussing path dependence and the role of history in institutional change); *see also* W. BRIAN ARTHUR, INCREASING RETURNS AND PATH DEPENDENCE IN THE ECONOMY 28–29 (1994) (discussing conditions under which small changes are determinative of larger structural changes in the economy).

421. *See* ARTHUR, *supra* note 420, at 13–14, 28–29 (discussing the concepts of inflexibility and path dependence).

422. NORTH, *supra* note 420, at 94.

423. *See id.* at 92–104 (discussing path dependence in the context of institutional change).

transaction cost bargaining failures may slow or prevent the market from correcting nonoptimal initial allocations of resources. The effects of strategic bargaining and loss aversion are not ameliorated by the traditional Coasean prescription of simply reducing transaction costs. Thus, even where regulators recognize a need for government intervention in facilitating market exchange, a Coasean approach may lead analysts to underestimate the importance of the method for endowing initial rights. The literature critiquing the application of the Coase Theorem implies that, while the Coase Theorem remains a powerful analytical tool, it does not relieve regulators of the burden of making wise decisions regarding the initial endowment of resources. Relying upon the market to ensure an efficient distribution of domain names will prove inadequate. The market approach fails not only the test of efficiency, but also perhaps tests of distributive justice. We must keep in mind that the distribution of the initial entitlements of resources will have a significant effect on the ultimate distribution of wealth in the economy.[424]

D. Obsolescence

As with anything dependent upon technology, obsolescence is a constant threat to the domain name system.[425] Perhaps websites will be found through spoken commands to a computer. Perhaps the system will be replaced by a visual representation scheme, where our virtual avatars walk through cyberspace to find what we are looking for.[426] Perhaps search technologies will be perfected such that they invariably find the sought-after site.[427]

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424. A strong version of the Coase Theorem holds that, under prescribed circumstances, the initial legal entitlement will not change the distribution of wealth; the resulting distribution will be *invariant* to the initial entitlements. *See* John J. Donohue III, *Diverting the Coasean River: Incentive Schemes to Reduce Unemployment Spells*, 99 YALE L.J. 549, 550 (1989) (discussing efficiency, invariance, and distribution predictions of the Coase Theorem); *see also* Donald H. Regan, *The Problem of Social Cost Revisited*, 15 J.L. & ECON. 427, 427 (1972) (critiquing efficiency and invariance claims as not following from standard assumptions of individual economic behavior); Richard O. Zerbe, Jr., *The Problem of Social Cost in Retrospect*, 2 RES. L. & ECON. 83 (Richard O. Zerbe, Jr. ed., 1980) (discussing conditions under which efficiency and invariance claims are valid). The invariance result holds only as a very limited special case. COOTER & ULEN, *supra* note 195, at 86 (discussing conditions necessary for invariance to hold); Daniel A. Farber, *Parody Lost/Pragmatism Regained: The Ironic History of the Coase Theorem*, 83 VA. L. REV. 397, 406 (1997) (arguing that "the invariance point is not terribly important," but that the efficiency point is the true significance of the Coase Theorem). I refer here to the weak version of the Coase Theorem, which predicts that, regardless of the initial legal entitlement, bargaining will result in an *efficient* outcome, but not necessarily the *same* outcome. Put another way, the Coase Theorem, in its weak form, does not differentiate between efficient points where a few people end up with a lot or where many people gain a moderate amount.

425. *See, e.g.*, Thomas G. Field, Jr., *Making the Most of Commercial Global Domains*, 41 IDEA 101, 124 (2001) (suggesting that replacement of the current system "seems inevitable").

426. Kang, *supra* note 13, at 1133 (defining "avatar" as "a graphical representation of the self").

427. We could then eliminate domain names entirely in favor of search engines that find websites, which would be identified uniquely only by their Internet Protocol numeric addresses.

Indeed, we see examples of alternatives currently in place. On America Online, instead of finding a website by domain name, you can find it by typing in an "AOL keyword." AOL believes that keywords make the web easier for its users, simplifying searches because the keyword often corresponds with the popular name for a company. Until it experienced financing difficulties, RealNames offered a similar service, enabling users to type in the "real name" of a company to find it.[428] Search engines provide yet another alternative to domain names for finding a website. Through search engines, the user describes the sought-after site and is shown possible matches, ranked by likelihood of match.

Yet neither the threat of obsolescence due to technological advances nor the possibility of private alternative systems should lead us to view the domain name system with indifference. First, an active secondary market in domain names[429] and the high market capitalization of many domain name registrars[430] suggest that many believe that obsolescence is not around the corner. Second, domain names may well survive technological improvements, much as telephone numbers have survived major changes in telephone technology.[431] Investments in branding domain names and widespread acceptance of the current system may lead to its continuance, despite the possibility of superior alternatives, demonstrating the power of path dependence.[432] Moreover, neither technological advance nor private alternatives will moot the questions that the domain name system raises. Whatever system performs the work of translating a command into a unique site will have to make many of the same decisions that the domain name system currently makes.

Removing the name-website translation from the domain name system to private entities would privatize the economic value in that service. For both AOL and RealNames, keywords are (or were) a source of revenue, sold in private transactions to companies vying for them.[433] Should "United" take

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See Mark Gibbs, *A Site by Any Other Name*, NETWORK WORLD, Apr. 19, 1999, at 82 (suggesting abandoning domain names in favor of Internet Protocol addresses found through search engines).

428. *See* http://www.RealNames.com (noting the cessation of RealNames' business operations due to Microsoft's decision not to renew its distribution agreement) (last visited Nov. 6, 2002).

429. *See generally* http://www.GreatDomains.com; http://www.eBay.com; http://www.YahooAuctions.com.

430. On February 13, 2002, for example, Register.com had a market capitalization of $320.3 million.

431. *See supra* note 105.

432. *See* discussion *supra* subpart VI(C)(3) (discussing the preservation of inefficient systems resulting from path dependence).

433. *See* Leslie Walker, *Web Shortcuts Become Key Issue*, WASH. POST, Apr. 20, 2000, at E1 (noting that AOL sells keywords to companies as part of a package of marketing services); Todd R. Weiss, *RealNames Expands Web 'Keywords' in VeriSign Deal*, COMPUTERWORLD, Oct. 10, 2001, http://www.idg.net/ic_710996_1794_9-10000.html (noting that "for businesses that want to use keywords to help steer customers to their sites to make purchases, they'll have to 'bite the bullet and

the surfer to United Airlines, United Technologies, or United Van Lines? If a user types "Bank," which bank will AOL supply? The answer will likely depend on who has paid the largest sum to AOL. Search engines, too, face the same issue because the ranking of results often favors those who have paid to be ranked highly.[434]

The solution to the problems of the domain name system is not to remove the difficult decisions it requires into the private realm, where the market will make the required social choices.[435] The Yanomami tribe, for example, may not fare well in a privatized process.[436] Nor will any other societal interests unaccompanied by economic power.

E. The Possibility of Reform

The flip side of obsolescence is the argument that it is already too late to make an impact on the future. The .com world is already pretty well settled.[437] What good is changing the rules for initial entitlements, when most of the entitlements have already been granted?

Reform is more possible than it might initially seem. First, new domain name space is being created in the form of .info, .biz, .name, .pro,[438] and .eu[439] TLDs, and new spaces are likely to be introduced in the future, such as .web, .kids, .law, .firm, and .family.[440] The rules for these spaces are being

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pay'"); Nick Turner, *Long Web Addresses a Pain, Keywords Could Be the Cure*, INVESTOR'S BUS. DAILY, Oct. 4, 1999, at A6 (noting that RealNames charged companies $100 per year to register their keywords); Dominic Gates, *Web Navigation For Sale*, INDUSTRY STANDARD, May 15, 2000, http://www.thestandard.com/article/0,1902,14735,00.html (noting that RealNames will sell yearly subscriptions to businesses or licenses to major-brand customers).

434. *See* Danny Sullivan, *Buying Your Way In To Search Engines*, *at* http://www.searchenginewatch.com/webmasters/paid.html (June 29, 2002) (noting that many search engines provide "paid placement" mechanisms).

435. Markets make social choices and regulate behavior, just as political processes do, but respond to different values. *See* KENNETH J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES 1 (2d ed. 1963) (noting that "[i]n a capitalist democracy there are essentially two methods by which social choices can be made: voting . . . and the market mechanism"); LESSIG, CODE, *supra* note 13, at 89 (noting how popular sites are rewarded by advertisers, while low-population forums are dropped by online servers).

436. *See supra* notes 85–86 and accompanying text.

437. Almost all of the words in the English language have already been taken. *See Internet Is Running Out of Domain Names*, NETWORK NEWS, Aug. 16, 2000, at 4, *available at* http://www.networknews.co.uk/News/1111173 (reporting results of a study indicating that "almost every word in the English language has been registered as a domain name").

438. Shannon Henry, *With ".pro" Comes a Certifiable Snub*, WASH. POST, May 11, 2002, at A1 (describing the controversy surrounding the allocation of .pro domain names, which are designated as only for "professionals").

439. Ian Black, *Europe Claims Place for .eu in Cyberspace*, GUARDIAN (MANCHESTER), Mar. 26, 2002, at P13, *available at* http://www.guardian.co.uk/international/0,3604,674007,00.html.

440. Many in the Internet community have long urged the introduction of new TLDs. In 1997, a number of international networking groups developed a plan to add the following seven: .firm, .store, .web, .arts, .rec, .info, and .nom. *See* Kirkman, *supra* note 81 (announcing the International

written now or have yet to be written. Second, many countries have not allocated their sovereign spaces on an unlimited first-come, first-served basis, and thus, for them, many valuable domain names lay yet unclaimed.[441] Some of these countries have already revised their rules mid-stream,[442] and others may do so in the future.[443] Even the rules for the very valuable .us domain name space are being rewritten at this time.[444] With the "Dot-Kids Implementation and Efficiency Act" the United States Congress has mandated the creation of a ".kids.us" domain name space with significant commercial value.[445] Imagine the value of new kid-friendly domain names such as www.toys.kids.us and www.games.kids.us. Taiwan recently introduced a new subdomain called game.tw.[446] Third, there is the possibility of "land" reform—of confiscating domain names from current holders and allocating them anew according to some more equitable principle. This might be particularly feasible for domain names that are not being used for a functioning site. Of course, any such attempt would lead to very serious objections, not the least of which will be from people demanding just compensation for an alleged Fifth Amendment taking and others decrying the confiscation as contrary to free market principles.

Ad Hoc Committee's plan to reform the Internet, in part by introducing seven new top level domains); *see also supra* note 81 (describing the Internet Ad Hoc Committee).

441. *See, e.g.*, Finnish Communications Regulatory Authority, *An ABC of Applying for Domain Names*, *at* http://www.ficora.fi/englanti/ Internet/abc.htm (last visited Sept. 28, 2002) (allowing companies to register Finnish domain names consisting of only their names and trademarks); NORID, http://www.norid.no/guide_eng.html (last visited Sept. 28, 2002) (allowing entities to register only one domain name each); *More '.cn' to Be Seen in Domain Name*, CHINA DAILY, Aug. 17, 2002, *available at* http://www1.chinadaily.com.cn/cndy/2002-08-17/82510.html (reporting that the Chinese Ministry of Information plans to ease registration restrictions on .cn domain).

442. *See, e.g.*, Michael Geist, *What's in a Name? Domain Reform Holds the Answer*, GLOBE & MAIL, Sept. 26, 2000, at E15 (noting that the Canadian domain name system will no longer require federal incorporation or a presence in multiple provinces before allowing registration of a .ca domain name); Roman Olearchyk, *Ukraine's National Domain Name Restored*, KYIV POST, Oct. 18, 2001, *available at* http://www.thepost.kiev.ua/main/9895; Netherlands Project Team, *Final Report on the Domain Name Debate*, *available at* http://www.domeinnaamdebat.nl/live/0/page478.html (Nov. 28, 2001); *Colombia Web code ".co" poised to challenge ".com"*, SILICONVALLEY.COM, June 11, 2001, *at* http://www.siliconvalley.com/docs/news/tech/059485.htm (noting that a Colombian university charged with administering the Colombian country domain space is considering offering the space for global commercial use, with proceeds to be invested "in technological advances in Colombia and university scholarships for poor students").

443. One possibility for expanding country spaces is to open up second-level domains which have been used so far only for indicators like ".co," so instead of having only Doctors.co.uk, there might be doctors.uk. This move would, of course, attract the complaints of companies registered at .co.uk. *MIC to Reform Internet Domain System*, KOREA HERALD, Mar. 5, 2002, *available at* http://www.koreaherald.com/SITE/data/html_dir/2002/03/05/200203050040.asp.

444. *See, e.g.*, Jonathan Krim, *Government Plans Expanded Use Of .US Domain*, WASH. POST, July 24, 2001, at E6 (describing plans to expand use of .us space so that a company might have an address such as www.companyname.us).

445. Pub. L. No. 107-317, 116 Stat. 2766 (2002); *see also* David McGuire, *Congress Approves 'Dot-Kids' Measure*, WASH. POST, Nov. 15, 2002.

446. *Taiwan to Introduce New ".game.tw" Second Level Domain in July*, TAIWAN HEADLINES, Mar. 1, 2002, www.taiwanheadlines.gov.tw/2002030163.html.

The final reform possibility, although more limited than that of general land reform, would involve the revision of the Uniform Dispute Resolution Policy or the Anticybersquatting Consumer Protection Act to include interests beyond those of trademark holders.[447] Rather than focus on the initial entitlement, such an approach would depend upon challenges to the domain name owner's claim to the name. Return again to the example of the domain name "Yanomami.com."[448] If we decided that the name should properly lie with the Yanomami tribe, we could simply revise the UDRP[449] (through an ICANN-instituted change) or the ACPA[450] (through Congress) to provide that the names of historical communities are their own, and that anyone holding such a name must relinquish it. Domain name holders forced to surrender a domain name through such a change will object to its retroactivity, but there is ample room in the rules for such an outcome. When a person registers a domain name, she represents that the registration does not "infringe upon or otherwise violate the rights of any third party."[451] The "rights" referred to are left undefined. But if they go beyond the lists of items on trademark registries to include common-law trademark rights, they might well include the rights of tribal groups or other communities to their name. Why should the domain name regime show more concern for Julia Roberts's claim (based on common-law trademark)[452] than that of the Yanomami? When the UDRP and the ACPA were adopted, they were expressly retroactive, enforced against domain names registered *prior* to their enactment.[453] Moreover, the UDRP states explicitly that changes subsequent

447. There is precedent for the expansion of bases upon which to challenge a domain name registration. The ACPA expanded the possible grounds for a challenge to include the use of the complainant's name (though this expansion was not made retroactively effective). Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1129 (2002) ("Any person who registers a domain name that consists of the name of another living person, or a name substantially and confusingly similar thereto, without that person's consent, with the specific intent to profit from such name by selling the domain name for financial gain to that person or any third party, shall be liable in a civil action by such person.").

448. *See supra* notes 85–86 and accompanying text.

449. *See supra* note 57 and accompanying text (describing ICANN UDRP).

450. *See supra* notes 58–59 and accompanying text (describing ACPA).

451. ICANN UDRP, *supra* note 57, at para. 2.

452. *See* Julia Fiona Roberts v. Russell Boyd (U.S. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D2000-0210 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0210.html (awarding the actress a domain name based on her name to which she claimed only common-law trademark rights); *see also* Jeanette Winterson v. Mark Hogarth (U.K. v. U.K.), WIPO Arbitration and Mediation Center, Case No. D2000-0235 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0235.html (deciding that Jeanette Winterson, a successful author, had established a common-law trademark right to her name and forcing the defendant to transfer to Winterson all domains containing her name).

453. The first decision decided under the UDRP involved a domain name registered prior to the date the UDRP became effective. *See* World Wrestling Fed'n Entm't, Inc. v. Michael Bosman (U.S. v. U.S.), WIPO Arbitration and Mediation Center, Case No. D99-0001 (2000), *available at* http://arbiter.wipo.int/domains/decisions/html/1999/d1999-0001.html (noting that the respondent

to the initial registration bind the registrant.[454] Some will object that adding grounds for challenging ownership will destabilize property rights. This concern has only minimal force: the possible additional grounds are quite limited and would affect only those domain names that might infringe on the rights of others.

Thus, we see that reform is not only necessary, as I have argued earlier, but also possible.

VII. Conclusion: The New, New Property

Taking stock of the developments of the prior decades, Charles Reich recognized in 1964 the emergence of a new form of property in the form of entitlements created by the government.[455] Reich saw the significant wealth effects and the inequalities generated by this form of property.[456] In this Article, I have attempted a similar survey of the new realm of cyberspace. We see the emergence of a "new, new" property, in the form of entitlements to commercially valuable sites in cyberspace. Unfortunately, the entitlements to this new property are handled without any apparent concern for questions of distributive justice. For cyberspace, legal scholars seem to have concentrated their energies on the values of free speech, privacy, intellectual creation, and autonomy. Equality and distributive justice are greatly neglected.

Cyberlaw scholars have valiantly challenged encroachments upon the public domain.[457] But while the scope of the intellectual property regime has far exceeded the regime's value,[458] we cannot focus exclusively on resisting privatization. In many areas, privatization will occur, and it is indeed often useful. We must also focus our attention on *how* we should privatize. We

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registered the domain name on October 7, 1999); http://www.icann.org/udrp/udrp-schedule.htm (specifying December 1, 1999 as the date of effectiveness). *Cf.* Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1129(4) (2002) (providing that the Act "shall apply to all domain names registered before, on, or after the date of the enactment," except in regard to damages, which will only be available for names registered on or after the date of enactment).

454. *See* ICANN UDRP, *supra* note 57, at para. 9.

455. Reich, *supra* note 286.

456. Reich notes the inequalities inherent in such processes: "Inequalities lie deep in the administrative structure of government largess. . . . The administrative process is characterized by uncertainty, delay, and inordinate expense; to operate within it requires considerable know-how. All of these factors strongly favor larger, richer, more experienced companies or individuals over smaller ones." *Id*. at 765.

457. Citations are numerous. *See* Conference on the Public Domain, *at* http://www.law.duke.edu/pd/papers.html (last visited Dec. 4, 2002) (providing links to various scholarly papers addressing encroachments on the public domain). *See generally* LARRY LESSIG, THE FUTURE OF IDEAS (2001) (discussing the various effects of the Internet and intellectual property on society, including potential encroachments on the public domain of ideas).

458. *See* Eldred v. Reno, 239 F.3d 372 (D.C. Cir. 2001) (upholding the Copyright Term Extension Act as a valid exercise of Congress's power), *cert. granted sub nom* Eldred v. Ashcroft, 534 U.S. 1126 (2002).

should bring our vision of a just society to that task. The siren call of the public domain should not deafen us to the song of equality in privatization.

The Information Age will continue to create new artifacts,[459] some that carry great value. We should not stand idly by and let rights to the assets of this new Age be determined haphazardly, thereby almost certainly guaranteeing that they go to people in the best position to take quick advantage of them. We should try to analyze them thoughtfully, remembering our real-world experience with inequality and exploitation and trying not to recreate it in new worlds.

459. MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 65 (10th ed. 1994) (defining an "artifact" as "something created by humans usually for a practical purpose").