

# DECODING CYBERPROPERTY

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*So, in the memory of men yet living, the great inventions that embodied the power of steam and electricity, the railroad and the steamship, the telegraph and the telephone, have built up new customs and new law. Already there is a body of legal literature that deals with the legal problems of the air.*

—Justice Benjamin Cardozo<sup>1</sup>

New technologies, as Justice Cardozo noted, can give rise to new laws. This Article examines the history and development of one such technology-enabled legal doctrine: cyberproperty.

Recently, several legal commentators have argued that common law doctrines should be expanded to give owners of computing equipment the right to prohibit others from interacting with their equipment in ways that cause no physical damage or software malfunctions. The creation of a new “cyberproperty” right has been endorsed by a diverse set of scholars.<sup>2</sup> The

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I should probably also note here that, along with William McSwain and Richard Berkman, I was counsel for Ken Hamidi in *Intel v. Hamidi*. The views expressed here are my own.

1. BENJAMIN N. CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* 62 (1921).

2. See, e.g., Patricia L. Bellia, *Defending Cyberproperty*, 79 N.Y.U. L. REV. 2164 (2004); Richard A. Epstein, *Cybertrespass*, 70 U. CHI. L. REV. 73 (2003) [hereinafter Epstein, *Cybertrespass*]; Richard A. Epstein, *Intel v. Hamidi: The Role of Self-Help in Cyberspace?*, 1 J.L. ECON. & POL'Y 147 (2005) [hereinafter Epstein, *Intel v. Hamidi*]; Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047 (2005); I. Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, J. ONLINE L. art. 7 (1996); David McGowan, *The Trespass Trouble and the Metaphor Muddle*, 1 J.L. ECON. & POL'Y 109 (2005) [hereinafter McGowan, *The Trespass Trouble*]; David McGowan, *Website Access: The Case for Consent*, 35 LOY. U. CHI. L.J. 341 (2003) [hereinafter McGowan, *The Case for Consent*]; R. Polk Wagner, *On Software Regulation*, 78 S. CAL. L. REV. 457 (2005); Richard Warner, *Border Disputes: Trespass to Chattels on the Internet*, 47 VILL. L. REV. 117 (2002). Student commentators have joined in the call for cyberproperty rights as well. See, e.g., Julie Beauregard, Note, *Intel Corp. v. Hamidi: Trespassing in Cyberspace*, 43 JURIMETRICS J. 483 (2003); J. Brian Beckham, Note, *Intel v. Hamidi: Spam as a Trespass to Chattels—Deconstruction of a Private Right of Action in California*, 22 J. MARSHALL J. COMPUTER & INFO. L. 205 (2003); Patty M. DeGaetano, Note, *Intel Corp. v. Hamidi: Private Property, Keep Out—The Unworkable Definition of Injury for a Trespass to Chattels Claim in Cyberspace*, 40 CAL. W. L. REV. 355 (2004); David M. Fritch, *Click Here for Lawsuit—Trespass to Chattels in Cyberspace*, 9 J. TECH. L. & POL'Y 31 (2004); Daniel Kearney, *Network Effects and the Emerging*

essence of the new right is “a right to exclude others from access to network-connected resources.”<sup>3</sup> The cyberproperty right is generally conceived of as absolute. Other commentators have noted with alarm the extent to which courts have seemed to embrace arguments for cyberproperty.<sup>4</sup>

This Article examines recent developments in both the doctrine and theory of the cyberproperty right. The first part of this Article looks primarily at two seminal cases that might be considered bookends to the story of cyberproperty: *Thrifty-Tel, Inc. v. Bezenek*<sup>5</sup> and *Intel Corp. v. Hamidi*.<sup>6</sup> The *Thrifty-Tel* case is known as the starting point of cyberproperty. The *Hamidi* case is sometimes seen as concluding the story of cyberproperty, but in fact, it leaves cyberproperty doctrine largely an open issue.

The second part of this Article, anticipating future struggles over the scope of cyberproperty rights, challenges two assumptions that act as theoretical and rhetorical engines driving arguments for cyberproperty. The first questionable assumption is that an interest in prohibiting others from interacting with networked computing machinery is properly seen as analogous to an interest in excluding others from entering into or using real or personal property. This assumption is generally coupled with a belief that the creation of new private property rights in “cyberspace” (that might be allocated by market mechanisms) is the best means of promoting the public good. The second questionable assumption is that the social power of computer code should be understood as either equivalent to or interchangeable with the power of law. This reasoning generally seems to follow from Professor Lawrence Lessig’s claim that “code is law.”<sup>7</sup>

Both of those assumptions seem to drive arguments for cyberproperty and both need to be questioned. With regard to the first assumption, the legally salient features of computer code include features that should resist categorization as property—at least in traditional senses of that word. Even within “law and economics” approaches, there are abundant reasons to be skeptical of the desirability of treating digital information resources as analogous to traditional property. With regard to the second assumption, code is very much unlike law. Conflating technological powers of exclusion with law can have a tendency to confuse as much as illuminate the proper role of law in the digital environment.

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*Doctrine of Cybertrespass*, 23 YALE L. & POL’Y REV. 313 (2005).

3. Wagner, *supra* note 2, at 496.

4. See, e.g., Dan L. Burk, *The Trouble with Trespass*, 4 J. SMALL & EMERGING BUS. L. 27 (2000); Dan Hunter, *Cyberspace as Place and the Tragedy of the Digital Anticommons*, 91 CAL. L. REV. 439 (2003); Mark A. Lemley, *Place and Cyberspace*, 91 CAL. L. REV. 521 (2003); Michael J. Madison, *Rights of Access and the Shape of the Internet*, 44 B.C. L. REV. 433 (2003); Jane K. Winn, *Crafting a License to Know from a Privilege to Access*, 79 WASH. L. REV. 285 (2004).

5. 54 Cal. Rptr. 2d 468 (Ct. App. 1996).

6. 71 P.3d 296 (Cal. 2003).

7. LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 6 (1999).

## I. CYBERPROPERTY IN LEGAL DOCTRINE

Debates over cyberproperty law are not simply debates over the wisdom of new legislative enactments. They are debates over the evolution and interpretation of the common law in a new technological context. Given that cyberproperty has grown through cases attempting to remedy cyberspatial harms with the “ancient” doctrine of trespass to chattels, it makes sense to start any discussion with a history of that legal doctrine.<sup>8</sup>

### A. *The Birth of Cyberproperty Doctrine*

The first cyberproperty case is usually said to be *Thrifty-Tel, Inc. v. Bezenek*.<sup>9</sup> This is because *Thrifty-Tel* was the first case to apply the trespass to chattels doctrine to the operation of networked digital machines. *Thrifty-Tel* involved two teenagers (invariably described in all secondary literature as “hackers”<sup>10</sup>) who were attempting to obtain “free” long distance service. Ryan and Gerry Bezenek, the “Bezenek boys,” had obtained a confidential phone number that allowed them to dial into a commercial long distance switching network.<sup>11</sup> The boys dialed into the network and then attempted to find a working access code by manual guessing. They manually punched in various six digit sequences (making 162 calls over several days), but this was to no avail, and they failed to find a working number.

Frustrated, they turned to automation, using a computer program to dial and guess randomly at access codes.<sup>12</sup> Over a seven-hour period, they made 1300

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8. *Ticketmaster Corp. v. Tickets.Com, Inc.*, No. CV99-7654-HLH (VBKx), 2003 U.S. Dist. LEXIS 6483, at \*11 (C.D. Cal. Mar. 6, 2003) (“The trespass to chattels issue requires adapting the ancient common law action to the modern age.”); *Epstein, Intel v. Hamidi*, *supra* note 2, at 149 (“ancient rules of trespass to chattels”).

9. *See, e.g., Bellia*, *supra* note 2, at 2260; *Burk*, *supra* note 4, at 29; Kevin Emerson Collins, *Cybertrespass and Trespass to Documents*, 54 CLEV. ST. L. REV. 41, 46-48 (2006); Adam Mossoff, *Spam—Oy, What a Nuisance!*, 19 BERKELEY TECH. L.J. 625, 641 (2004); Steven Kam, Note, *Intel Corp. v. Hamidi: Trespass to Chattels and a Doctrine of Cyber-Nuisance*, 19 BERKELEY TECH. L.J. 427, 433 (2004); Laura Quilter, Note, *The Continuing Expansion of Cyberspace Trespass to Chattels*, 17 BERKELEY TECH. L.J. 421, 428-29 (2002).

10. Though the court also referred to the boys this way, *see Thrifty-Tel*, 54 Cal. Rptr. 2d at 471, it should be noted that the term also has a more positive meaning. For in-depth discussions of what “hacking” might mean, *see* STEVEN LEVY, *HACKERS: HEROES OF THE COMPUTER REVOLUTION* 23-35 (1984) (explaining the generally licit origins of the term); DOUGLAS THOMAS, *HACKER CULTURE* 10-11 (2002); E. Gabriella Coleman, *The Social Construction of Freedom in Free and Open Source Software: Hackers, Ethics, and the Liberal Tradition* (Aug. 2005) (unpublished Ph.D. dissertation, University of Chicago) (on file with author). It is quite possible that the boys thought they were “phreaks” rather than hackers. *See* Michael Lee et al., *Electronic Commerce, Hackers, and the Search for Legitimacy: A Regulatory Proposal*, 14 BERKELEY TECH. L.J. 839, 857 (1999).

11. *See Thrifty-Tel*, 54 Cal. Rptr. 2d at 471.

12. This type of “dumb” password guessing is generally described as a “dictionary attack.”

automated calls to the network. Roughly one new phone call was made every twenty seconds, followed by an automated random six-digit number guess. This also failed to produce a working account code. It succeeded, however, in tying up the small Thrifty-Tel switching network so completely that paying customers were unable to make use of it.<sup>13</sup>

Thrifty-Tel had known since the first manual calls that the Bezenek household was the source of the numerous failed access attempts. Rather than contact the Bezeneks, they went to state court and brought suit against the Bezenek boys' parents. The trial court found the boys liable for fraud and conversion. Thrifty-Tel was awarded almost \$50,000 in damages and attorney fees.<sup>14</sup> Damages were based largely upon Thrifty-Tel's uniform tariff schedule that charged thousands of dollars for every day of "unauthorized access" to its system.

The Bezenek parents appealed the decision. California Court of Appeals Justice Thomas Crosby, Jr. was faced with a doctrinal puzzle. The trial court had found that the Bezenek boys had committed conversion by appropriating Thrifty-Tel's services. This seemed to be a legal error, because the existing law held that intangibles were generally not subject to the tort of conversion under California law.<sup>15</sup> Justice Crosby noted that "Dean Prosser has cautioned against scuttling conversion's tangibility requirement altogether . . ."<sup>16</sup> Rather than venture into an open conflict with the leading treatise on torts, Justice Crosby concluded that the plaintiffs had made a successful claim of trespass to chattels (which they had not pleaded).

Trespass to chattels is sometimes described as an "ancient" tort,<sup>17</sup> though it is not much more ancient than most other torts found in the common law. It seems somewhat antiquated today because it is so rarely encountered, having been rendered marginal by the historical expansion of the law of conversion. Trespass to chattels remains a potentially useful tort because it recognizes a more subtle form of injury than conversion recognizes.<sup>18</sup> Where damages to personal property fall short of the "forced sale" damages found in conversion, trespass to chattels steps in to provide a cause of action.<sup>19</sup>

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See James Grimmelman, *Regulation by Software*, 114 YALE L.J. 1719, 1743 (2005).

13. See *Thrifty-Tel*, 54 Cal. Rptr. 2d at 471.

14. *Id.* at 472.

15. Several years later, Judge Kozinski of the Federal Court of Appeals for the Ninth Circuit brushed away this doctrinal problem with the law of conversion. See *Kremen v. Cohen*, 337 F.3d 1024, 1030 (9th Cir. 2003); *infra* Part II.A (discussing the *Kremen* case).

16. See *Thrifty-Tel*, 54 Cal. Rptr. 2d at 472 (citing PROSSER & KEETON ON THE LAW OF TORTS § 15, at 92 (5th ed. 1984) [hereinafter PROSSER & KEETON]).

17. See, e.g., Epstein, *Intel v. Hamidi*, *supra* note 2, at 148-49 ("the ancient rules of trespass to chattels").

18. See generally Russ VerSteege, *Law in Ancient Egyptian Fiction*, 24 GA. J. INT'L & COMP. L. 37, 61 n.100 (1994) (comparing trespass to chattels with conversion).

19. In a claim of conversion, a successful plaintiff essentially obtains a forced sale of the chattel to the tortfeasor. A claim of trespass to chattels awards the plaintiff only those damages

The term “trespass” in “trespass to chattels” simply denotes a legally cognizable form of unlawful injury, not a spatial “trespass” as that term is used in popular discourse. A trespass to chattels lies where there is intermeddling with or dispossession of personal property.<sup>20</sup> Unlike in the case of trespass to real property, a plaintiff claiming trespass to chattels must provide evidence of some actual damage or dispossession of the chattel by the defendant in order to bring a claim.<sup>21</sup> For example, although brushing against another person’s car despite an explicit prohibition against doing so is generally considered rude, it is not a trespass to chattels.<sup>22</sup> The owner of the car is free to try to prevent others from touching the car, of course, but the state will not become involved if those efforts fail. Compare this to the case of land, where spatial trespass can be found and enjoined by the state without regard to the possibility of some damage to the land.<sup>23</sup>

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caused by the interference. To illustrate this difference: if a car were stolen and/or destroyed, a tortfeasor should be forced to pay the owner the full value of the car—this is conversion. If, on the other hand, a car or another chattel were merely scratched, compensation for cosmetic repairs would be warranted, but the forced sale of the entire car would provide the plaintiff with an unwarranted windfall. In such a case, trespass to chattels—called by Prosser and Keeton “a little brother of conversion”—steps in to provide an appropriate remedy. *Thrifty-Tel*, 54 Cal. Rptr. 2d at 473; *Intel Corp. v. Hamidi*, 71 P.3d 296, 302 (Cal. 2003) (citing the treatise); PROSSER & KEETON, *supra* note 16, § 14, at 85-86.

20. See generally RESTATEMENT (SECOND) OF TORTS § 216-48 (1965).

21. PROSSER & KEETON, *supra* note 16, § 14, at 85-86.

22. There is one interesting exception in the RESTATEMENT (SECOND) OF TORTS § 218 cmt. h (1965). If one person uses another’s toothbrush, the chattel would seem to be “damaged” in some way, pursuant to prevalent social beliefs pertaining to hygiene and saliva-swapping. One imagines this should be true although the toothbrush has not suffered visible damage, and may very well be, from a logical and medical standpoint, as good as new. Cf. McGowan, *The Case for Consent*, *supra* note 2, at 344 n.18 (discussing the toothbrush illustration and noting “the owner might reasonably feel less keen on using the chattel again” (emphasis added)). The forced sale of conversion, however, would seem to be the preferred and appropriate legal remedy for the tort of toothbrush misuse.

Another Restatement illustration points out the rule of the damage requirement: a child pulling a dog’s ears is not trespass to the chattel. Oddly enough, this was a real case. Elaine Glidden, a child, pulled the ears of a dog named Toby. Toby bit her. Elaine’s mother sued and Toby’s owners claimed they were immunized from liability under the applicable statute because Elaine was engaged in tortious conduct at the time she was bitten. The court rejected this defense. See *Glidden v. Szybiak*, 63 A.2d 233, 235 (N.H. 1949) (“No claim was advanced at the trial that the dog Toby was in any way injured by the conduct of the plaintiff Elaine. Consequently she could not be held liable for a trespass to the dog.”); see also *CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015, 1022 (S.D. Ohio 1997) (discussing briefly the *Glidden* case).

23. See Ellen P. Goodman, *Spectrum Rights in the Telecosm to Come*, 41 SAN DIEGO L. REV. 269, 326-27 (2004). Calabresi & Melamed’s theory of “property” rules as opposed to “liability” rules thus relies on a dichotomy that resonates with real property but seems less applicable to personal property. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and*

There is a lively debate about the reasons for this interesting difference between real and personal property “trespass” regimes. Some commentators suggest the difference may be overstated or perhaps even an unwarranted American aberration from English common law.<sup>24</sup> But even those who feel this way acknowledge that the law currently treats the two forms of trespass differently.<sup>25</sup> The Prosser & Keeton treatise, relied upon by the court in *Thrifty-Tel*, explains that “the dignitary interest in the inviolability of chattels, unlike that as to land, is not sufficiently important to require any greater defense than the privilege of using reasonable force when necessary to protect them.”<sup>26</sup>

Probably the most popular explanation for the difference seen between the law of trespass to land and chattels is that the state has a less significant interest in protecting things from being touched. The state presumably would not want to hear cases about those who happen to, in public places, defiantly touch cars, umbrellas or dogs. The social cost of addressing such dignitary harms outweighs the social benefits that state intervention might provide.<sup>27</sup>

On the trespass to chattels claim, Justice Crosby’s opinion in *Thrifty-Tel* can be read as consistent with traditional doctrine. Indeed, *Thrifty-Tel* was ultimately understood as consistent with traditional California common law by a majority of the California Supreme Court.<sup>28</sup> The opinion explicitly acknowledged the requirement of injury to state a claim for trespass to chattels and the requisite damage was clearly evident—the switching network was overburdened by the

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*Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972); see also Dan L. Burk, *Legal Consequences of the Cyberspatial Metaphor*, in 1 INTERNET RESEARCH ANNUAL 17 (Mia Consalvo et al. eds., 2003). For a concise summary of the theory and subsequent literature, see Goodman, *supra*, at 334-37. The theory has been applied to cyberproperty as well. See, e.g., Bellia, *supra* note 2, at 2189-90; Wagner, *supra* note 2, at 498, 509-11.

24. Epstein, *Cybertrespass*, *supra* note 2, at 76-78.

25. See, e.g., Epstein, *Cybertrespass*, *supra* note 2, at 73, 76 (acknowledging that real property rules do not apply to chattels); McGowan, *The Case for Consent*, *supra* note 2, at 356-57 (“[T]he law traditionally protected harmless invasions of chattels by giving owners a privilege to use self-help rather than by giving them a cause of action, which owners of land did have.”).

26. PROSSER & KEETON, *supra* note 16, § 14, at 87. An analogous summary of the distinction can be found in the RESTATEMENT (SECOND) OF TORTS § 218 cmt. e (“The interest of a possessor of a chattel in its inviolability, unlike the similar interest of a possessor of land, is not given legal protection.”).

27. See generally Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 154 (1998) (describing how new property rights are inefficient in instances of high administrative costs and negligible social benefits); Goodman, *supra* note 23, at 325 (highlighting the significance of administrative costs that could result from the application of property principles to disputes over spectrum rights).

28. *Intel Corp. v. Hamidi*, 71 P.3d 296, 303-04 (Cal. 2003). However, it should be noted that Justice Janice Rogers Brown (now a member of the United States Court of Appeals for the District of Columbia Circuit) argued in her dissent that *Thrifty-Tel* stood for the proposition, contrary to the traditional common law view, that any unauthorized use of a chattel was actionable as a trespass. *Id.* at 324-25 (Brown, J., dissenting).

boys' conduct to a point that the network could not be used by paying subscribers.<sup>29</sup>

Despite its fealty to traditional doctrine, *Thrifty-Tel* is generally known as the first "cyberproperty" case due to one rather confusing footnote.<sup>30</sup> Carrying forward his earlier concerns about the requirement of tangibility for conversion, Justice Crosby inscrutably noted in footnote six that the "trespass" alleged in the case was of an intangible variety.<sup>31</sup> The need for this footnote was unclear—why should the tangibility or intangibility of the *means* of a trespass to chattels be relevant to the case? The switching network was clearly a tangible machine.<sup>32</sup> This established the necessary tangibility. There was no recognized tangibility issue about the *means* of conversion or trespass to chattels.

By analogy, a claim based upon theft or destruction of a claimed intangible chattel *interest* (destroying a person's *pride* in a car) would raise considerable problems if one is concerned about curtailing the harms addressed by property law. The *means* that one might use to damage a chattel, on the other hand, would not seem to be relevant. Partial destruction of another person's car by an intangible laser beam or by a tangible sledge hammer should reasonably produce the same type of tort liability.

An investigation of *means* of trespass, however, might have been proper if the case had involved a trespass to real property. A plaintiff claiming real property trespass in California (and many other jurisdictions) must prove a tangible *means* of spatial intrusion. Throwing a rock on someone's lawn will give rise to a claim for trespass to real property. On the other hand, the transmission of noise, smoke, or light cannot form the basis for a claim of trespass to real property in California—those types of spatial "intrusions" are considered under the law of nuisance.<sup>33</sup>

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29. Justice Crosby in fact reversed the trial court on the basis that the \$50,000 damage calculations were faulty because they were based upon uniform tariff rates. He instead required the plaintiff to prove "actual damages." His opinion stated: "[S]urely [Thrifty-Tel] is able to produce evidence showing with reasonable certainty any damages caused by Ryan and Gerry in November 1991." *Thrifty-Tel, Inc. v. Bezenek*, 54 Cal. Rptr. 2d 468, 474-75 (Ct. App. 1996).

30. *Id.* at 473 n.6.

31. *Id.*

32. If processing power were understood as a chattel, this would trigger the same "tangibility" concerns found in the doctrine of conversion. See *People v. Johnson*, 560 N.Y.S.2d 238 (Crim. Ct. 1990) (finding the possession of a long distance access code to be a possession of "stolen property" under New York law); Orin S. Kerr, *Cybercrime's Scope: Interpreting "Access" and "Authorization" in Computer Misuse Statutes*, 78 N.Y.U. L. REV. 1596, 1609-10 (2003) (noting that early applications of common law to computer access crimes were theoretically inconsistent, but generally found property interests to exist in intangibles); Quilter, *supra* note 9, at 437-38 ("While computers are undoubtedly chattels, it is questionable whether electronic networks and computer processing power also qualify as chattel.").

33. *San Diego Gas & Elec. Co. v. Super. Ct.*, 920 P.2d 667, 694-96 (Cal. 1996); *Wilson v. Interlake Steel Co.*, 649 P.2d 922, 924-25 (Cal. 1982). See generally PROSSER & KEETON, *supra* note 16, § 13, at 71 (distinguishing between trespass by the "invasion of tangible matter" and the

The standard cyberproperty history thus recounts how *Thrifty-Tel* created cyberproperty doctrine when, in footnote six, the court inexplicably cited a series of real property cases in a case involving trespass to chattels. Justice Crosby placed two different forms of “trespass” in uncomfortable proximity to one another by stating:

[T]he California Supreme Court has intimated migrating intangibles (e.g., sound waves) may result in a trespass, provided they do not simply impede an owner’s use or enjoyment of property, but cause damage. In our view, the electronic signals generated by the Bezenek boys’ activities were sufficiently tangible to support a trespass cause of action.<sup>34</sup>

Obviously, this was a confusing amalgam of two kinds of trespass—but so what? This entire footnote was irrelevant to the ultimate holding. At most, this footnote inexplicably analyzed the tangibility of trespass *means* in a case involving a trespass to chattels. Nothing in the footnote abrogated the requirement of damage—the court specifically (in the quoted text above) *required* evidence of damage. The footnote was unfortunate and confusing, but in light of the greater context of the case, it was clearly not Justice Crosby’s intent to spur a doctrinal revolution.

Even so, many scholars and lawyers see *Thrifty-Tel* as the starting point for cyberproperty doctrine. The notion of cyberproperty was that electronic interactions might be prohibited in the *absence* of damage, and electronic equipment owners might be given the near-absolute<sup>35</sup> right to exclude that is granted to owners of real property.<sup>36</sup> That reading of *Thrifty-Tel* was a highly questionable spin on *Thrifty-Tel* at the time it was decided, but it would become an increasingly accepted reading in subsequent years.

### B. The Expansion of Cyberproperty

In 1999, Professor Dan Burk summarized post-*Thrifty-Tel* developments in

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intentional introduction of “smoke, gas, noise, and the like,” which are covered by the law of nuisance); WILLIAM B. STOEBOCK & DALE A. WHITMAN, *THE LAW OF PROPERTY* § 7.1, at 412 (3d ed. 2000) (citing contradictory authorities on whether invasions by “dust and smoke” constitute a trespass).

34. *Thrifty-Tel*, 54 Cal. Rptr. 2d at 473 n.6 (internal citation omitted).

35. Even real property rights are not as “absolute” as often claimed to be. *See State v. Shack*, 277 A.2d 369, 373 (N.J. 1971); *see generally* Carol M. Rose, *Canons of Property Talk, or, Blackstone’s Anxiety*, 108 *YALE L.J.* 601 (1998).

36. Examples of this reading can be found in scholarly commentary. *See* Mossoff, *supra* note 9, at 642 (“The defendant in *Thrifty-Tel* was found liable for trespass to chattels solely because he gained unauthorized access to plaintiff’s computer network.”); Maureen A. O’Rourke, *Property Rights and Competition on the Internet: In Search of an Appropriate Analogy*, 16 *BERKELEY TECH. L.J.* 561, 589 (2001) (“Drawing on this precedent, a developing line of cases in the personal property context has held electronic signals to be sufficiently tangible to state a cause of action in trespass to chattels.”).

a highly influential article.<sup>37</sup> He noted that the decision gave rise to a line of subsequent cases establishing what appeared to be a nascent cyberproperty right to prohibit electronic contact in the same manner that one could enjoin trespass to real property. Burk blamed *Thrifty-Tel* for the expansion: “the *Thrifty-Tel* version of trespass follows the form of trespass to chattels, and yet has the substance of trespass to land.”<sup>38</sup> In Burk’s words, *Thrifty-Tel* “essentially reversed several hundred years of legal evolution, collapsing the separate doctrines of trespass to land and trespass to chattels back into their single common law progenitor, the action for trespass.”<sup>39</sup> He surmised that “the cause of action masquerading in these cases as ‘trespass to chattels’ is in fact a novel, hybrid form of a property right whose parameters have yet to be properly defined.”<sup>40</sup>

As stated above, this might not have been what *Thrifty-Tel* was initially, but, by the time Burk was writing, it was what *Thrifty-Tel* had become. A string of cases noted by Burk had already extended the purported “trespass” logic of footnote six in *Thrifty-Tel*.<sup>41</sup> These cases involved defendants engaged in the practice of sending massive numbers of commercial email messages—in other words, “spamming.” They were generally brought by the internet service providers who received and processed the unwanted email messages. The most famous of these cases was *CompuServe, Inc. v. Cyber Promotions, Inc.*, which relied upon the logic of the *Thrifty-Tel* decision in finding a trespass to chattels.<sup>42</sup>

In all of these cases, sending hundreds of millions of email messages to servers tended to disrupt machine performance in ways that were largely analogous to the disruptions created by the Bezenek boys in *Thrifty-Tel*. Therefore, it is understandable that courts looked to and relied upon *Thrifty-Tel* to enjoin “spamming.”<sup>43</sup> But the courts considering these “spam” cases were perhaps somewhat more cognizant than the *Thrifty-Tel* court that they were

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37. Burk, *supra* note 4.

38. *Id.* at 39.

39. *Id.* at 33; Hunter, *supra* note 4, at 487.

40. Burk, *supra* note 4, at 39. Burk was highly critical of “electron trespass.” *Id.* at 41. Other scholars were not quite as hostile, but largely agreed with Burk that the *Thrifty-Tel* line of cases were suspect. See, e.g., Niva Elkin-Koren, *Let the Crawlers Crawl: On Virtual Gatekeepers and the Right to Exclude Indexing*, 26 U. DAYTON L. REV. 179, 203-06 (2001); Maureen A. O’Rourke, *Fencing Cyberspace: Drawing Borders in a Virtual World*, 82 MINN. L. REV. 609 (1998); Maureen A. O’Rourke, *Shaping Competition on the Internet: Who Owns Product and Pricing Information?*, 53 VAND. L. REV. 1965 (2000).

41. See, e.g., *Am. Online, Inc. v. Nat’l Health Care Disc., Inc.*, 121 F. Supp. 2d 1255, 1279-80 (N.D. Iowa 2000); *Hotmail Corp. v. Van\$ Money Pie Inc.*, 47 U.S.P.Q.2d (BNA) 1020, 1025 (N.D. Cal. 1998); *Am. Online, Inc. v. IMS*, 24 F. Supp. 2d 548, 550-52 (E.D. Va. 1998); *Am. Online, Inc. v. LCGM, Inc.*, 46 F. Supp. 2d 444, 451-52 (E.D. Va. 1998); *CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015, 1025-27 (S.D. Ohio 1997); *Cyber Promotions, Inc. v. Am. Online, Inc.*, 948 F. Supp. 436, 447 (E.D. Pa. 1996).

42. *CompuServe, Inc.*, 962 F. Supp. at 1021-22.

43. See, e.g., *id.*

employing and adapting a common law doctrine in an attempt to solve a new problem that legislatures had been slow to address. Although the mail servers were inevitably impaired by the activities, the courts were not always very careful in spelling out exactly what type of impairment was essential to stating a claim of trespass to chattels.<sup>44</sup> Fixing the spam problem seemed to be a higher priority than doctrinal precision. As a result, the strange ambiguity found in the *Thrifty-Tel* footnote was not removed—it was increasingly, at least implicitly, endorsed.

By 2000, cyberproperty progressed past these commercial spam cases to a more general right to freedom from all forms of electronic “intrusion” on the Internet. That year featured three important cyberproperty decisions, all of which involved plaintiffs seeking injunctions against unauthorized access to websites: *eBay, Inc. v. Bidder’s Edge, Inc.*,<sup>45</sup> *Register.com, Inc. v. Verio, Inc.*<sup>46</sup> and *Ticketmaster Corp. v. Tickets.com, Inc.*<sup>47</sup> Two of these cases, *eBay* and *Ticketmaster*, were litigated in California federal district courts, and thus applied the same California common law precedents utilized in *Thrifty-Tel*. Unfortunately, the decisions in these cases did not settle the issue of cyberproperty conclusively.

The *eBay* case gained considerable publicity, and is perhaps still the most popular case involving trespass to chattels found in law school casebooks today. At issue was an attempt by eBay to prohibit another company from conducting regular queries of its online auction data. eBay brought suit in federal district court, under a theory that the querying constituted a trespass to its server system. Though the queries did not overwhelm the computer system as in *Thrifty-Tel*, they did use a significant percentage of the company’s resources.<sup>48</sup>

At the district court level, eBay was awarded an injunction against the defendant company, Bidder’s Edge, on the basis that there was a significant chance that other companies would attempt to replicate the aggregation activities of Bidder’s Edge.<sup>49</sup> An appeal was filed, but the case was settled before it could

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44. See Bellia, *supra* note 2, at 2178-81 (querying the basis for claims of damage in cyberproperty decisions).

45. 100 F. Supp. 2d 1058 (N.D. Cal. 2000).

46. 126 F. Supp. 2d 238 (S.D.N.Y. 2000), *aff’d*, 356 F.3d 393, 404 (2d Cir. 2004) (citing the Restatement and noting, “[T]he district court found that Verio’s use of search robots, consisting of software programs performing multiple automated successive queries, consumed a significant portion of the capacity of Register’s computer systems.”).

47. *Ticketmaster Corp. v. Tickets.com, Inc.*, No. CV99-7654-HLH (BQRx), 2000 U.S. Dist. LEXIS 12987, at \*19 (C.D. Cal. Aug. 10, 2000) (denying trespass claim on the basis of copyright preemption and noting “In addition, it is hard to see how entering a publicly available web site could be called a trespass, since all are invited to enter.”); *Ticketmaster Corp. v. Tickets.com, Inc.*, No. CV99-7654-HLH (BQRX), 2000 U.S. Dist. LEXIS 4553, at \*12 (C.D. Cal. Mar. 27, 2000) (“A basic element of trespass to chattels must be physical harm to the chattel (not present here) or some obstruction of its basic function (in the court’s opinion not sufficiently shown here).”).

48. *eBay*, 100 F. Supp. 2d at 1066-68.

49. *Id.* at 1066 (“Where, as here, the denial of preliminary injunctive relief would encourage

proceed to the Ninth Circuit.<sup>50</sup> eBay may prove to be an attractive case for class discussion simply because it is so ambiguous. Commentators have disagreed about exactly what precedent the *eBay* case established and what portion of the opinion might be regarded as dicta.<sup>51</sup>

The *Ticketmaster* case, decided at roughly the same time, was less publicized, but was understood as an unequivocal loss for the cause of cyberproperty rights. In *Ticketmaster*, the plaintiff sought an injunction against a company that engaged in unauthorized, non-damaging website access. The injunction the plaintiff company sought was denied not once, but twice.<sup>52</sup> The status of trespass to chattels with regard to website access in California was thus in limbo, with two federal district courts taking opposite paths.

The doctrinal zenith of cyberproperty arrived in the 2001 case of *Oyster Software, Inc. v. Forms Processing, Inc.*,<sup>53</sup> a third federal district court case, also set in California. Just like the prior cases about websites, the plaintiff claimed that the defendant committed trespass to chattels because the defendant accessed the plaintiff's website in violation of instructions not to do so.<sup>54</sup> The defendant moved for summary judgment on this claim, stating the plaintiff had not claimed damage to the chattel.<sup>55</sup>

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an increase in the complained-of activity, and such an increase would present a strong likelihood of irreparable harm, the plaintiff has at least established a possibility of irreparable harm.”).

50. See Troy Wolverton, *eBay, Bidder's Edge End Legal Dispute*, CNET NETWORKS, INC., Mar. 1, 2001, <http://news.com.com/2100-1017-253443.html>.

51. See, e.g., Bellia, *supra* note 2, at 2178-79 (noting how “different portions of the opinion focus on different possible harms” and concluding that the court “relied both on Bidder's Edge's use of a portion of eBay's servers and on the potential for harm to eBay's servers if others replicated Bidder's Edge's activities.”); Lemley, *supra* note 4, at 528 n.27 (stating that the requirement of actual injury was the true holding of the case, but that the dicta of inherent injury via use was the reasoning relied upon by subsequent courts).

52. *Ticketmaster*, 2000 U.S. Dist. LEXIS 4553, at \*11; *Ticketmaster*, 2000 U.S. Dist. LEXIS 12987, \*16-17. Judge Hupp would, three years later, revisit the issue a third time in the case. See *Ticketmaster Corp. v. Tickets.com*, No. CV99-7654-HLH (VBKx) 2003 U.S. Dist. LEXIS 6483 (C.D. Cal. Mar. 6, 2003) (“This approach to the tort of trespass to chattels should hurt no one's policy feelings; after all, what is being attempted is to apply a medieval common law concept in an entirely new situation which should be disposed of by modern law designed to protect intellectual property interests.”).

53. No. CV00-0724JCS, 2001 U.S. Dist. LEXIS 22520, \*43 (N.D. Cal. Dec. 6, 2001).

54. The plaintiff was upset that the defendant has copied certain information made available on the website. That information was meta data contained in the website's HTML file—data which can be read easily by anyone viewing a webpage. *Id.* at \*3-\*4. See generally F. Gregory Lastowka, *Search Engines, HTML, and Trademarks: What's the Meta For?*, 86 VA. L. REV. 835, 843-45 (2000) (describing HTML meta data). While the access to the webpage was presumably allowed, the defendant's copying of the meta tags was considered “unauthorized” because it was claimed to be a violation of the contractual terms posted on the website. *Oyster Software, Inc.*, 2001 U.S. Dist. LEXIS 22520, at \*37.

55. *Oyster Software, Inc.*, 2001 U.S. Dist. LEXIS 22520, at \*2.

The district court disagreed. Based upon its reading of the progeny of *Thrifty-Tel*, and most importantly of *eBay, Inc. v. Bidder's Edge*, the court concluded that the requirement of damage to the chattel had now been removed in California and that the "defendant's conduct was sufficient to establish a cause of action for trespass . . . simply because the defendant's conduct amounted to 'use' of Plaintiff's computer."<sup>56</sup> Proof of damage to the chattel, according to the court, was no longer required to state a trespass to chattels claim. Simple lack of plaintiff authorization (in this case, contained in a website's terms of use) was deemed sufficient.<sup>57</sup>

*Oyster Software* made it clear that whatever *Thrifty-Tel* might have meant when decided, it had indeed given birth to something new in the law. The court in *Oyster Software* embraced cyberproperty.

### C. Intel Corp. v. Hamidi

Two years later, the California Supreme Court decided the case of *Intel Corp. v. Hamidi*.<sup>58</sup> This was the first decision of the state's highest court on the common law question of the scope of trespass to chattels in the digital environment. The facts of the case were substantially different from those in either *Thrifty-Tel* or *Oyster Software* because the allegedly trespassory activity was the transmission of email. This raised the specter, again, of "spam," the bane of the Internet era. However, the email messages at issue in *Hamidi* were not truly "spam" according to most popular definitions of that word—they were non-commercial messages targeted to a particular audience and containing a pointed message.<sup>59</sup>

Ken Hamidi was a former employee of Intel Corporation. Hamidi sent, over the course of two years, six short textual emails to over 30,000 Intel employees. The emails were sent on behalf of an organization called Former and Current Employees of Intel ("FACE-Intel") and were highly critical of the company.<sup>60</sup> According to the California Supreme Court: "[T]he messages criticized Intel's employment practices, warned employees of the dangers those practices posed to their careers, suggested employees consider moving to other companies, solicited employees' participation in FACE-Intel, and urged employees to inform themselves further by visiting FACE-Intel's Web site."<sup>61</sup>

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56. *Id.* at \*40.

57. *Id.*

58. 71 P.3d 296 (Cal. 2003).

59. See, e.g., Harvard Law Review Association, *Developments in the Law—The Law of Cyberspace* (pt. 3 *The Long Arm of Cyber-reach*), 112 HARV. L. REV. 1610, 1623 (1999) ("Although Intel raises some of the same concerns as commercial spamming cases such as CompuServe, it is a case of first impression because the challenged speech is not commercial spam, but instead is speech of public concern that lies at the heart of First Amendment protection.").

60. *Hamidi*, 71 P.3d at 301. Hamidi created the recipient address list using an Intel directory on a floppy disk anonymously sent to him. *Id.*

61. *Id.*

Intel instructed its employees not to reply to Hamidi's messages and attempted (with only partial success) to block the messages from reaching their intended recipients. Without employing any complicated technical countermeasures, Hamidi evaded most of Intel's attempts at blocking. Because Intel's email system and policies (like most all company email systems and policies) allowed individual employees to make personal use of their email accounts and to receive messages from previously unknown senders, Hamidi simply sent new FACE-Intel messages from new email accounts on new computers. Though old addresses might have been blocked, pursuant to the default settings on the Intel mail servers, messages from new addresses were generally passed through to Intel employees.<sup>62</sup>

In March 1998, after Hamidi sent a fifth message to Intel employees, Intel contacted Hamidi by letter and demanded that he stop attempting to communicate with Intel employees via their Intel email addresses. The letter warned that if he sent further emails, he would be subject to a lawsuit. In a reply letter, Hamidi stated that he would not be intimidated and that he had a First Amendment right to speak with Intel's employees. Several months later, he sent a sixth FACE-Intel mailing.<sup>63</sup>

Intel then brought suit against Hamidi, proceeding on a *Thrifty-Tel* theory of trespass to chattels.<sup>64</sup> In the early stages of the trial court proceeding, Hamidi lacked counsel and proceeded *in propria persona* against Intel's lawyers. Intel conceded that there was no damage to its chattels as a result of Hamidi's mailings; however, it claimed that it suffered damage due to the time it spent trying to block the messages from FACE-Intel. It also claimed it lost employee productivity due to the contents of Hamidi's communications, and the trial court found this sufficient. In 1999, a permanent injunction was entered prohibiting Hamidi from "sending unsolicited e-mail to addresses on Intel's computer systems."<sup>65</sup>

Hamidi appealed. In 2001, a majority of the judicial panel for the court of appeals affirmed the permanent injunction.<sup>66</sup> The majority cited the inscrutable language from footnote six of *Thrifty-Tel* and declared, "[w]e agree."<sup>67</sup> The appellate panel was explicit about its willingness to endorse the modification of traditional trespass to chattels doctrine, explaining how "[t]he common law

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62. *Id.* at 302.

63. *Id.*

64. Intel included a claim of nuisance as well, but later dropped this cause of action. *Id.* Several commentators, starting with Burk, have suggested that some new formulation of nuisance law might be the apposite common law real property doctrine to protect a putative cyberproperty interest. See Burk, *supra* note 4, at 53 ("[T]he correct property theory might be nuisance to web sites, rather than trespass. . . . Of course, the law of nuisance applies to real property, not to chattels. But this property distinction has proven no obstacle to courts thus far . . ."); Mossoff, *supra* note 9, at 629 (arguing for the application of nuisance law to prohibit unsolicited commercial email).

65. *Hamidi*, 71 P.3d at 302 (citation omitted).

66. *Intel Corp. v. Hamidi*, 114 Cal. Rptr. 2d 244, 246 (Ct. App. 2001).

67. *Id.* at 251.

adapts to human endeavor” and how “the [trespass to chattels] tort has reemerged as an important rule of cyberspace.”<sup>68</sup>

Much like the court in *Oyster Software*, decided at the same time, the *Hamidi* appellate court majority relied on *eBay* and *Thrifty-Tel* for the proposition that damage was no longer a requirement of trespass to chattels. Mere electronic contact with computing equipment was deemed sufficient “use” to support injunctive relief.<sup>69</sup> As Dan Hunter noted, the language of the majority’s opinion was especially interesting because it seemed to embrace real property metaphors, not just at a doctrinal level, but also at a deeper conceptual level, likening Intel’s mail system to a type of real property in the “place” of cyberspace.<sup>70</sup>

Hamidi had argued, consistently with his original claim, that any injunction issued would violate his free speech rights under the federal and state constitutions.<sup>71</sup> These claims were rejected by the majority of the appellate panel. The court stated that the cases cited by Hamidi “differ from the present case in that Hamidi was enjoined from trespassing onto Intel’s *private property*.”<sup>72</sup> Thus, by analogizing cyberspace to a place and the digital transmission of email to a physical entry “onto” Intel’s property, the appellate court avoided addressing free speech issues by avoiding the question of state action. Instead, it privileged what amounted to a new “cyberproperty” interest over the assertion of a constitutionally protected interest in speech.<sup>73</sup>

Justice Kolkey dissented from the appellate panel decision. Unlike the majority, he cited *Thrifty-Tel* not for the creation of cyberproperty rights, but for the proposition that “California cases have consistently required actual injury as an element of the tort of trespass to chattel.”<sup>74</sup> Citing Dan Burk’s article, he explained how “the extension of the tort of trespass to chattel to the circumstances here has been condemned by the academic literature.”<sup>75</sup> Justice Kolkey also argued that Intel’s claim of loss of productivity was inadequate to state a claim of trespass to chattels. If this were the case, he said, “then every unsolicited communication that does not further the business’s objectives (including telephone calls) interferes with the chattel to which the

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68. *Id.* at 247.

69. *Id.* at 264; *Hamidi*, 71 P.3d at 302 (“The majority [in the appellate decision] took the view that the use of or intermeddling with another’s personal property is actionable as a trespass to chattels without proof of any actual injury to the personal property.”).

70. Hunter, *supra* note 4, at 487-88 (“[The majority] had characterized Hamidi’s actions as ‘invading [Intel’s] internal, proprietary email system,’ and characterized Hamidi’s use of the system as ‘entry’ . . . . [T]he court was conceiving the chattels-based tort in real-property terms.”)

71. *See* *Pruneyard Shopping Ctr. v. Robins*, 447 U.S. 74, 90-91 (1980); *Golden Gateway Ctr. v. Golden Gateway Tenants Ass’n*, 29 P.3d 797 (Cal. 2001). *See generally* Dawn C. Nunziato, *The Death of the Public Forum in Cyberspace*, 20 BERKELEY TECH. L.J. 1115, 1165-66 (2005) (discussing the *Hamidi* case in the context of free speech and state action doctrines).

72. *Hamidi*, 114 Cal. Rptr. 2d at 254.

73. *Id.*

74. *Id.* at 259 (Kolkey, J., dissenting).

75. *Id.* at 262.

communication is directed simply because it must be read or heard, distracting the recipient.”<sup>76</sup> Justice Kolkey’s opinion argued not just that cyberproperty rules were an errant interpretation of legal doctrine—they were also a questionable way to regulate communicative activities.<sup>77</sup>

Hamidi petitioned the California Supreme Court and review was granted. In a 4-3 decision, the court reversed the appellate panel. Joining the dissenters (without a separate opinion) was Chief Justice Ronald M. George. Justice Kathryn M. Werdegar, writing for the majority, divided her analysis into three sections: 1) an explanation and application of the traditional doctrine (reversing on the basis that there had been no allegation of damage); 2) a consideration and rejection of arguments for adaptation of the doctrine to remove the requirement of damage in the electronic context; and 3) an explanation (in dicta) that any injunction against Hamidi would be subject to constitutional scrutiny as a limitation on free speech rights.<sup>78</sup>

The first section of the opinion provided the basis for reversal. In that section the court re-affirmed the rule established prior to *Thrifty-Tel* that some damage or impairment to the chattel in question was required to bring an action for trespass to chattels.<sup>79</sup> Intel had relied on the case law that had evolved from *Thrifty-Tel*—precedent that was not binding before the California Supreme Court.<sup>80</sup> Notably, though, the majority of the California Supreme Court did *not* overrule most of these cases, but instead explained and distinguished them. The many cases involving bulk commercial email were distinguished on the basis that the transmissions in those cases “both overburdened the ISP’s own computers and made the entire computer system harder to use for recipients.”<sup>81</sup> Hence, the facts of the cases provided evidence of “damage” to the chattel by the impairment of the functioning.

With regard to the statement in *eBay* that use of any portion of a computer’s

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76. *Id.* at 261.

77. *Id.* at 261-63.

78. *Id.* at 247-58.

79. *Intel Corp. v. Hamidi*, 71 P.3d 296, 300 (Cal. 2003).

The consequential economic damage Intel claims to have suffered, i.e., loss of productivity caused by employees reading and reacting to Hamidi’s messages and company efforts to block the messages, is not an injury to the company’s interest in its computers . . . any more than the personal distress caused by reading an unpleasant letter would be an injury to the recipient’s mailbox, or the loss of privacy caused by an intrusive telephone call would be an injury to the recipient’s telephone equipment.

*Id.*; see also *id.* at 308 (noting the detachment of the injury from any concern about the chattel).

80. The dissenting justices in *Hamidi* faulted the majority for misreading prior cyberproperty cases. *Id.* at 308-10. Given the *de novo* standard of review, however, this is obviously somewhat beside the point. See Bellia, *supra* note 2, at 2184 (“eBay involved a federal district court applying California law, a subject on which the California Supreme Court has the last word; and, of course, the *Hamidi* court was free to reject the interpretation of Ohio law reflected in the *CompuServe* case.”).

81. *Hamidi*, 71 P.3d at 300.

processing power amounted to a trespass to chattels, the court made clear that this should have been considered dicta and stated that if *eBay* were read to create a new cyberproperty right, it “would not be a correct statement of California or general American law on this point.”<sup>82</sup> In essence, the majority decided that trespass to chattels doctrine should retain its traditional character by continuing to require a demonstration of damage to the chattel by a plaintiff.<sup>83</sup>

In Section II of its opinion, the court expressly considered “whether California common law should be extended to cover, as a trespass to chattels, an otherwise harmless electronic communication.”<sup>84</sup> In this section, the court considered arguments made by Dan Burk, as well as further developments of those arguments by Professors Dan Hunter,<sup>85</sup> Mark Lemley,<sup>86</sup> and Lawrence Lessig.<sup>87</sup> The language quoted from Hunter, Lemley, and Lessig consisted of opinions that essentially sided with Burk’s arguments. The consensus was that the creation of property-like rules of absolute exclusion and mandatory bargaining would have a stifling effect on the free flow of information on the Internet.

The court also addressed arguments to the contrary advanced by Professor Richard Epstein, who had drafted an amicus brief in support of Intel.<sup>88</sup> Epstein, building in part on his similar efforts in the *eBay* case, had written passionately in favor of the judicial creation of a new common law cyberproperty right.<sup>89</sup> Among other things, Epstein had argued that the basis for a cyberproperty right might be found in common rhetorics used to describe digital environments.<sup>90</sup>

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82. *Id.* at 298 (discussing language in *eBay*).

83. *See, e.g.*, Ronnie Cohen & Janine S. Hiller, *Towards a Theory of Cyberplace: A Proposal for a New Legal Framework*, 10 RICH. J.L. & TECH. 2, 23 (2003) (stating that the *Hamidi* decision “returns the tort of trespass to chattels to its common law roots.”); Epstein, *Cybertrespass*, *supra* note 2, at 76-77 (noting that the “standard American legal view” is that “deliberate trespasses to chattels that [result] in neither damage to, nor removal of, the chattel” are not actionable.).

84. *Hamidi*, 71 P.3d at 308.

85. Hunter, *supra* note 4.

86. Professor Mark Lemley wrote the amicus briefing for a group of law professors supporting *Hamidi*. *See* Brief of Amicus Curiae Professors of Intellectual Property and Computer Law Supporting Reversal, *Intel Corp. v. Hamidi*, 114 Cal. Rptr. 2d 244 (Ct. App. July 25, 2002) (No. S103781), available at <http://www.law.berkeley.edu/institutes/bclt/pubs/lemley/intelvhamidi.pdf> [hereinafter Lemley, Brief in Support of Appellant].

87. Lawrence Lessig mentioned and briefly critiqued arguments made by Richard Epstein in the *eBay* litigation. LAWRENCE LESSIG, *THE FUTURE OF IDEAS* 170-71 (2001).

88. *Hamidi*, 71 P.3d at 309.

89. *Id.*

90. *Id.*; *see also* Epstein, *Cybertrespass*, *supra* note 2, at 82-83 (“Common language speaks of internet ‘addresses,’ for, of course, individuals and firms occupy private ‘sites’ along the internet ‘highway.’ It also speaks of the ‘architecture’ of the internet, which may direct and influence conduct in both real and virtual ‘space.’ . . . [C]yberspace looks and functions more like real property than chattels. If one is forced to choose between the two sets of rules, then manifestly the real property rules offer a better fit.”).

Epstein pointed the court to the recurrent observation in cyberlaw writing (most thoroughly investigated by Dan Hunter) that cyberspace was conceptualized as a place.<sup>91</sup> He then transformed this into a claim that because cyberspace was understood to be like a place, it should be legally regulated like a place.<sup>92</sup> The *Hamidi* majority, however, explicitly rejected Epstein's argument:

Professor Epstein suggests that a company's server should be its castle, upon which any unauthorized intrusion, however harmless, is a trespass.

Epstein's argument derives, in part, from the familiar metaphor of the Internet as a physical space, reflected in much of the language that has been used to describe it: "cyberspace," "the information superhighway," e-mail "addresses," and the like. Of course, the Internet is also frequently called simply the "Net," a term, Hamidi points out, "evoking a fisherman's chattel." A major component of the Internet is the World Wide "Web," a descriptive term suggesting neither personal nor real property . . . . Metaphor is a two-edged sword.<sup>93</sup>

Section II ultimately purported to be inconclusive. The court stated that it was "discuss[ing] this debate among the amici curiae and academic writers only to note its existence and contours, not to attempt its resolution."<sup>94</sup> However, Section II of the opinion indicated that the majority was well aware of theoretical debates surrounding cyberproperty and aware of its power to expand the scope of the common law doctrine.<sup>95</sup> The court's explication of the academic debates made clear that it ultimately sided with the arguments of Burk and similar commentators opposing the expansion of cyberproperty rights.

Finally, in Section III, the majority responded to the critiques of two dissenting justices with "[a] few clarifications."<sup>96</sup> The dissenters had argued for an expansion of the doctrine and opined, like the prior appellate majority, that the First Amendment was inapplicable to the case because the tort of property trespass, once established, trumped any solicitude for speech interests.<sup>97</sup> The majority disagreed, again rejecting metaphorical readings of cyberspace and stressing the fact that the case did not involve a spatial intrusion:

Hamidi himself had no tangible presence on Intel property, instead speaking from his own home through his computer. He no more invaded

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91. *Id.*; see also Hunter, *supra* note 4.

92. *Hamidi*, 71 P.3d at 309.

93. *Id.* at 309. Epstein has objected to this characterization of this argument. See discussion *infra* Part II.A.

94. *Hamidi*, 71 P.3d at 311.

95. *Id.* at 309-11.

96. *Id.* at 311-12.

97. *Id.* at 331-32 (Monk, J., dissenting). This approach has been adopted by prior courts. See, e.g., *Cyber Promotions, Inc. v. Am. Online, Inc.*, 948 F. Supp. 436, 477 (E.D. Pa. 1996) (rejecting the application of First Amendment claims to the corporate email servers of AOL).

Intel's property than does a protester holding a sign or shouting through a bullhorn outside corporate headquarters, posting a letter through the mail, or telephoning to complain of a corporate practice.<sup>98</sup>

Having rejected the notion that spatial property rights should trump Hamidi's speech rights, the majority stated that Hamidi would have a constitutional defense against the issuance of an injunction on the facts of the case: "[T]he use of government power . . . by an award of damages or an injunction in a private lawsuit, is state action that must comply with First Amendment limits."<sup>99</sup>

Thus, the third section of the majority opinion in *Hamidi* refuted cyberproperty claims in three ways. According to the majority, cyberproperty claims were (1) doctrinally incorrect pursuant to common law precedent, (2) misguided (or at least highly questionable) as an instance of common law evolution, and (3) subject, at least in the case of email, to First Amendment defenses.<sup>100</sup> For these reasons, the *Hamidi* decision is often seen as the California Supreme Court decisively ending the cyberproperty story that began in the wake of *Thrifty-Tel*.

#### D. Cyberproperty Post-Hamidi

Yet the story of the cyberproperty extension of trespass to chattels law has not ended—indeed, it has probably just begun. While California is properly understood as the birthplace and the proving grounds for most all the important decisions regarding cyberproperty, it is only one state among fifty. Other states will likely be called upon to consider anew the issue of cyberproperty.

When other state courts read the *Hamidi* decision, they will find two vigorous dissenting opinions. Justice Janice Rogers Brown wrote an opinion expressing a pronounced commitment to the sanctity of private property rights.<sup>101</sup> She concluded her dissent by arguing that: "The principles of both personal liberty and social utility should counsel us to usher the common law of property into the digital age."<sup>102</sup>

Justice Richard M. Mosk<sup>103</sup> seemed fully willing to embrace the cyberspace analogies to real property ownership by stating that "[Hamidi's] action, in crossing from the public Internet into a private intranet, is more like intruding

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98. *Hamidi*, 71 P.3d at 311-12. The court continued, "[t]hat a property owner may take physical measures to prevent the transmission of others' speech into or across the property does not imply that a court order enjoining the speech is not subject to constitutional limitations." *Id.* at 312 n.8.

99. *Id.* at 311 (emphasis omitted).

100. *Id.* at 308, 311-12.

101. *Id.* at 325 (Brown, J., dissenting) ("Those who have contempt for grubby commerce and reverence for the rarified heights of intellectual discourse may applaud today's decision, but even the flow of ideas will be curtailed if the right to exclude is denied.").

102. *Id.*

103. This was Justice Richard Mosk of the Court of Appeals for the Second District sitting by designation.

into a private office mailroom, commandeering the mail cart, and dropping off unwanted broadsides on 30,000 desks.”<sup>104</sup> Justice Mosk thought there was sufficient doctrinal support for a finding that the harm alleged by Intel was cognizable.<sup>105</sup> However, citing to Justice Cardozo’s *Nature of the Judicial Process*, he also argued that an extension of the common law was warranted in light of technological developments.<sup>106</sup>

These strong judicial intuitions in favor of cyberproperty will likely find new voices. A recent case, *Sherwood 48 Associates v. Sony Corp. of America*,<sup>107</sup> illustrates the potential for the reconsideration of cyberproperty in other jurisdictions. In the *Sherwood 48* case, the defendant Sony had used digital images of certain buildings in Times Squares in order to create the 2002 summer blockbuster *Spider Man*.<sup>108</sup> Sony did not use the unaltered images of the buildings, but instead revised their appearance by replacing existing advertisements with those of Sony’s partners. The building owners brought suit. The primary claims in the case were based in trademark law and were ultimately dismissed.<sup>109</sup> However the plaintiffs had also claimed that Sony had committed a trespass to their buildings by taking measurements with lasers.<sup>110</sup> The federal district court seemed perplexed by these claims: “[t]respass?—bouncing a laser beam off a building to create a digital photograph? Light beams bounce off plaintiffs’ three buildings day and night in the city that never sleeps.”<sup>111</sup>

Of course according to the earlier district court ruling in *Oyster Software*, non-damaging electromagnetic contact with tangible property actually *could* provide the basis for a claim of trespass to chattels.<sup>112</sup> And perhaps for this reason, the Federal Court of Appeals for the Second Circuit reversed the district court’s dismissal of the trespass to chattels claim.<sup>113</sup> The Second Circuit, citing to *Hamidi*, stated:

This case presents an unsettled question of New York state law, to wit, whether a trespass is committed under New York law when a party’s physical contact with another party’s personal property diminishes the value of that property without damaging that property. . . . A New York

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104. *Hamidi*, 71 P.3d at 326 (Mosk, J. dissenting).

105. *Id.* at 327.

106. *Id.* at 330.

107. 213 F. Supp. 2d 376 (S.D.N.Y. 2002), *aff’d in part, vacated in part, remanded in part*, 76 Fed. App’x 389 (2d Cir. 2003).

108. See generally Rebecca J. Brown, *Genetically Enhanced Arachnids and Digitally Altered Advertisements: The Making of Spider-Man*, 8 VA. J.L. & TECH. 1 (2003) (describing the suit and ruminating on similar “digital alteration” issues).

109. *Sherwood 48*, 213 F. Supp. 2d at 377.

110. *Id.*

111. *Id.*

112. *Oyster Software, Inc. v. Forms Processing, Inc.*, No. CV00-0724JLS, 2001 U.S. Dist. LEXIS 22520, at \*40 (N.D. Cal. Dec. 6, 2001).

113. See *Sherwood 48*, 76 Fed. App’x at 392.

court should determine whether physical damage to the Buildings in this case is a prerequisite to a trespass claim.<sup>114</sup>

While the plaintiffs apparently settled their claims, the Second Circuit's decision demonstrates that it remains quite possible that a state judiciary in New York, Virginia, Illinois, or elsewhere, may ultimately decide to reject the *Hamidi* majority's reasoning.

Even if other states choose to follow the *Hamidi* majority, it is uncertain how much the *Hamidi* decision limits the expansion of the cyberproperty doctrine. One might argue that the decision effectively preserved more of the novel cyberproperty theory than it rejected.<sup>115</sup> Only *Oyster Software*, the most extreme enunciation of the cyberproperty concept was singled out as completely inconsistent with the California doctrine.<sup>116</sup> Other cases in the shadow of *Thrifty-Tel* were considered consistent with the holding because the plaintiffs had demonstrated "substantial impairment" to the computing equipment in question.<sup>117</sup> In the *Hamidi* case, Intel admitted that the electronic contact at issue caused *no* damage to its systems. Will any future cyberproperty plaintiffs be inclined to make that same concession? Is it so difficult, as a practical matter, for a potential plaintiff to claim something slightly different?

While a complete absence of damage to the computer equipment is obviously insufficient under *Hamidi*, the definition of impairment to computing equipment is not perfectly clear. Depending on where that threshold is set, the *Hamidi* case may actually leave ample room for the expansion of cyberproperty. For instance, in a recent case in the Northern District of Illinois, a court relied upon the *Thrifty-Tel* line of cases and the decision in *Hamidi* in allowing a trespass to chattels suit to proceed against a defendant company that had installed "spyware" on the plaintiff's computer.<sup>118</sup> The court stated that "[s]imply put, plaintiff

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114. *Id.* Accordingly, the state law claim of trespass to chattels was then dismissed by the federal district court without prejudice. *See* *Sherwood 48 Assocs. v. Sony Corp. of Am.*, No. 02-CV2746, 2004 U.S. Dist. LEXIS 700 (S.D.N.Y. Jan. 18, 2004).

115. *See* *Kam*, *supra* note 9, at 438 (suggesting that the *Hamidi* decision was primarily significant for the extent to which it *adopted* the novel logic of the *Thrifty-Tel* line of cases). "The court thus adopted the changes imposed upon trespass to chattels by federal district courts in California. . . . If the California Supreme Court wished to repudiate the trend towards breadth in trespass to chattels, it could have done so. It instead embraced the prior decisions . . . ." *Id.*

116. *Intel Corp. v. Hamidi*, 71 P.3d 296, 307 n.5 (Cal. 2003) (distinguishing the case by saying: "[W]e do not read *eBay* . . . as holding that the actual injury requirement may be dispensed with, and such a suggestion would, in any event, be erroneous as a statement of California law." (footnote omitted)).

117. *See, e.g., eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058 (N.D. Cal. 2000); *Am. Online, Inc. v. LCGM, Inc.*, 46 F. Supp. 2d 444 (E.D. Va. 1998); *Am. Online, Inc. v. IMS*, 24 F. Supp. 2d 548 (E.D. Va. 1998); *Hotmail Corp. v. Van\$ Money Pie, Inc.*, 47 U.S.P.Q.2d 1020 (N.D. Cal. 1998); *CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015 (S.D. Ohio 1997).

118. *Sotelo v. Direct Revenue Holdings, LLC*, 384 F. Supp. 2d 1219, 1229-33 (N.D. Ill. 2005).

alleges that Spyware interfered with and damaged his personal property, namely his computer and his Internet connection, by over-burdening their resources and diminishing their functioning.”<sup>119</sup>

From a doctrinal perspective, this is consistent with the holding in *Hamidi*. But what, exactly, is the damage alleged? Almost all forms of electronic interaction with a computer system use *some* resources and thereby diminish *some* functioning. The line that must be crossed with respect to “functional harm or disruption” is not clear.<sup>120</sup> The *Hamidi* opinion essentially invites lower courts to consider these issues on a case-by-case basis. If the *Thrifty-Tel* zeitgeist has not faded, one might well predict that cyberproperty will eventually arrive back at something approaching the rule in *Oyster Software*.<sup>121</sup> On the other hand, if *Hamidi* is given teeth, the requirement of “functional harm” may come to be what Justice Mosk claimed it was in dissent—a requirement of a total system crash in order to state a claim.<sup>122</sup> Between those two extremes lies a broad field of possibilities.

So it seems that the cyberproperty doctrine is at an interesting crossroads that may lead to one of several possible futures.<sup>123</sup> Given the range of possibilities, it is important to note how several legal commentators have recently argued in defense of cyberproperty rights and criticized the *Hamidi* decision as misguided.<sup>124</sup> Other state supreme courts considering the expansion of cyberproperty may look to such scholarly arguments for guidance in applying the ancient doctrine of trespass to chattels to the new frontier of the Internet.

## II. CYBERPROPERTY IN LEGAL THEORY

Many recent commentators have been solicitous of the concept of cyberproperty and critical of the *Hamidi* decision.<sup>125</sup> In Part I, I argued that the *Hamidi* decision was correct with regard to traditional legal doctrine. For the most part, cyberproperty proponents have not contested this. Instead, they claim that changes in common law doctrine to embrace cyberproperty would constitute an improvement.

From my perspective, contemporary arguments for cyberproperty are

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119. *Id.* at 1231.

120. *Hamidi*, 71 P.3d at 308.

121. *See, e.g., Register.com, Inc. v. Verio, Inc.*, 126 F. Supp. 2d 238 (S.D.N.Y. 2000), *aff'd*, 356 F.3d 393, 404 (2d Cir. 2004) (finding that trespass to chattels was established where the district court made a determination that “a significant portion” of the recipient machine’s “resources” were used).

122. *Hamidi*, 71 P.3d at 326 (Mosk, J., dissenting) (“[T]he majority leave Intel, which has exercised all reasonable self-help efforts, with no recourse unless [Hamidi] causes a malfunction or systems “crash.”); *see also* Epstein, *Cybertrespass*, *supra* note 2.

123. Winn, *supra* note 4, at 286 (stating that the *Hamidi* decision is “unlikely to staunch the flow of controversy” over cyberproperty claims).

124. *See generally* sources cited *supra* note 2.

125. *See supra* note 2.

unpersuasive. They seem to rely, generally, on two fairly simple misconceptions. One is the assumption that “code is property” (or at least property-like), and the second is the assumption that “code is law” (or at least law-like). Both of these assumptions have some merit and history in cyberlaw scholarship, but they also have significant flaws when applied to cyberproperty, which will be examined below.

### A. *Decoding Digital Property*

At the bottom of all cyberproperty claims is an intuition that the digital code present within a computer is easily analogized to a form of property. Richard Epstein and Trotter Hardy are two prominent examples of legal theorists who have pushed for the use of analogies to *real* property in support of claims for cyberproperty rights.<sup>126</sup> Professor Hardy raised the possibility of “trespass to website” in 1996, the same year that *Thrifty-Tel* was decided.<sup>127</sup> Professor Epstein continues to argue in favor of “the extension of trespass to land rules to the Internet.”<sup>128</sup> He believes it is sound to conflate the interoperations of software with personal entries onto real property and he has strongly criticized the *Hamidi* majority for not doing so.<sup>129</sup> While other cyberproperty proponents are not so bold in arguments for the conflation of real property and digital property, the claim does not always seem foreign to their logic.<sup>130</sup>

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126. Epstein, *Intel v. Hamidi*, *supra* note 2, at 163; Hardy, *supra* note 2, ¶ 1.

127. Hardy, *supra* note 2, ¶ 1 (“Many of the words used to describe Web sites have a basis in real property: the word ‘site’ itself is one, as are such expressions as ‘home’ pages, ‘visiting’ Web sites, ‘traveling’ to a site and the like. This usage suggests that the trespass action might appropriately be applied to Web sites as well.”).

128. Epstein, *Intel v. Hamidi*, *supra* note 2, at 157.

No one would argue that a person is under a duty to open his home or business to some kinds of speech but not others. It hardly makes a difference that *Hamidi* wants to enter Intel’s business by Internet or on foot. The unauthorized entry has long been regarded as a *per se* violation under ordinary trespass principles. There is no reason to back off that view here.

*Id.*; see also Richard A. Epstein, *Intellectual Property: Old Boundaries and New Frontiers*, 76 *IND. L.J.* 803, 818 (2001) [hereinafter Epstein, *Intellectual Property*] (discussing his arguments in the *eBay* case and stating “The position I take . . . is that the rules that govern ordinary space provide a good template to understand what is at stake in cyberspace.”).

129. Epstein, *Intel v. Hamidi*, *supra* note 2, at 157. “Justice Werdegar’s fanciful use of etymology to break the parallel between physical and cyberspace is totally misguided. In one of the worst plays on words imaginable, she concocts a derivation for the term Internet that is false to its history and understanding.” *Id.* at 160.

130. See, e.g., Fairfield, *supra* note 2, at 1102 (“[C]yberspace is neither a bad analogy nor a metaphor. Cyberspace is a descriptive term. It describes the degree to which some kinds of code act like spaces or objects. Taking this approach frees us to apply the developed body of property law to assist in solving inefficient allocations of rights on the internet.”); Hunter, *supra* note 4, at 516 (stating as a prominent critic of cyberproperty that “attempts to supplant the cyberspace as

Dan Hunter and Mark Lemley have noted how some courts have actually accepted this “code is land” equation.<sup>131</sup> However, most people, including most cyberproperty proponents, seem to agree that there must be some better justification for cyberproperty than the mere claimed metaphorical resemblance between cyberspace and real space.<sup>132</sup>

The first problem with suggesting that cyberspace is a place is that it is not. We might stop there; however, we might further add, that even when cyberspace is perceived as place-like, it is often described as an importantly different kind of space.<sup>133</sup> As Julie Cohen explains in a forthcoming article, the problem here is not that cyberspace is simply a place or non-place, full of property or non-property. The problem is that the “placeness” of cyberspace is a matter of ongoing social construction.<sup>134</sup> Some features and structures of cyberspace resemble structures in physical space, but any straightforward equation of place and cyberspace is far too simplistic. Even if we were to accept the fiction that cyberspace is a place, and ignore the many ways it is not like any other place, there is an additional problem: not all places are privately owned. Calling cyberspace a place does not lead inevitably to the conclusion that the best legal rule for cyberspace is one that mimics private land ownership. There are many real spaces, such as parks, highways, and oceans, that are not privately owned. Some very valuable real spaces, like beaches, are not spaces where the public is excluded.<sup>135</sup>

The claim that cyberspace is equivalent to real space is obviously an issue of faith more than logic, and it is not surprising that most advocates of cyberproperty look elsewhere for persuasive tools. While cyberproperty proponents often pay some tribute to the importance of spatial metaphors, their core claims tend to be something less ambitious: a claim that cyberproperty

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place metaphor are, I think, doomed to failure”); Mossoff, *supra* note 9, at 644 (“When land is dedicated to commercial goals that are achieved only with computers, the interference with the use of these computers is *ipso facto* an interference with the use of the land.”).

131. Hunter, *supra* note 4, at 516; Lemley, *supra* note 4, at 527-29.

132. David McGowan has defended those courts that Hunter and Lemley accuse of embracing metaphor claims of property in cyberspace on the basis that the opinions do no such thing, and to the extent that they do, the legal theory of property is no longer restricted to the concept of a physical thing—talk about property is instead properly understood as the proper allocation of entitlements with some secondary relation to particular physical objects. See McGowan, *The Trespass Trouble*, *supra* note 2, at 110-11.

133. Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 501, 503-06 (1999) (discussing various differences between “real space” and “cyberspace”).

134. Julie E. Cohen, *Cyberspace and/as Space*, 107 COLUM. L. REV. (forthcoming 2007), available at [https://papers.ssrn.com/so13/papers.cfm?abstract\\_id=898260](https://papers.ssrn.com/so13/papers.cfm?abstract_id=898260).

135. See, e.g., Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 919 (2005); see also Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 752-53 (1986) (discussing the multiple forms of property that are beneficially held in common).

regimes will promote greater efficiency.<sup>136</sup> The “Chicago School” is known for its historic espousal of creating social benefits by legally recognizing new forms of private property rights and thereby encouraging more efficient market transactions.<sup>137</sup> Many cyberproperty proponents are essentially trying to map the theories of Harold Demsetz onto the *terra nova* of cyberspace—parceling out plots of private ownership in order to avoid the tragedies they fear will befall schemes based on common ownership. Harold Demsetz is called into the service of William Gibson.<sup>138</sup>

Harold Demsetz famously pointed out how land held in common would tend to be used inefficiently by rationally selfish individuals engaged in over-grazing and under-cultivating.<sup>139</sup> He argued that legal privatization solved these problems and promoted more efficient and productive uses.<sup>140</sup> Many cyberproperty advocates seem confident that this abstract framework is effective not just with regard to claims about the social benefits obtainable through the privatization of land, but also with regard to privatizing the right to send electrons between networked computers. As Julie Cohen has noted previously, there appears to be a peculiar ideology of “cybereconomics” in play here, something as befitting Gibson’s phrase “consensual hallucination” as cyberspace itself.<sup>141</sup>

Statements about “cyberproperty” often seem to rely on a simplified vision of real property laws rather than a rich understanding of property doctrine and how it operates in practice. The exclusive rights recognized in *Oyster Software*

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136. Fairfield, *supra* note 2, at 1051. “[A] theory of virtual property is critical to ensure efficient use of internet resources, lower search costs, and reduce negotiation costs that would otherwise prevent the flow of high-value resources to high-value uses.” *Id.* “[V]irtual property ought to be protected because it represents the best way of splitting up use rights so as to cause people to use it efficiently.” *Id.* at 1094.

137. Cf. Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 TEX. L. REV. 873, 897 (1997) (reviewing JAMES BOYLE, *SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* (1996)) (noting how property rhetoric in intellectual property discourse has been largely animated not by real property law, but by concepts popularized by the Chicago School law-and-economics movement).

138. WILLIAM GIBSON, *NEUROMANCER* 51 (1984) (describing “cyberspace” as a “consensual hallucination”).

139. See Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. PAPERS 347 (1967); see also Epstein, *Intel v. Hamidi*, *supra* note 2, at 164 (“[T]he creation of any commons will chill the incentive to invest.”); Fairfield, *supra* note 2, at 1065-67 (explaining Demsetzian theory and applying it to virtual property claims).

140. Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1, 27-28 (2004).

141. Julie E. Cohen, *Lochner in Cyberspace: The New Economic Orthodoxy of “Rights Management,”* 97 MICH. L. REV. 462, 466 (1998) (“[T]he cybereconomists’ debt to the social ideology of *Lochner* runs deep. Their proposals turn out to be grounded in identical beliefs about the conceptual primacy of private property and private ordering and the illegitimacy of ‘redistributive,’ market-distorting legislation.”); see also Frischmann, *supra* note 135, at 931 & n.47.

were much more extreme than any analogous rights that currently exist in real property law.<sup>142</sup> Richard Epstein readily concedes this point,<sup>143</sup> but among other cyberproperty proponents, one senses a conviction that calling something “real property” entitles its owner to an absolute right to exclude others. In real property law, this is not so, as Michael Carrier has recently discussed at length.<sup>144</sup> To treat an entitlement as something analogous to traditional tangible property might invite the creation of numerous limitations on the extent of that right.<sup>145</sup>

But even if we decide that “cyberproperty” should be treated like a form of property, this does not mean that the traditional property rules and traditional limitations on rights would work in this context. If we wish to call the ones and zeros flowing through networks a form of property, we need an approach that is sensitive to the obvious differences between the way bits and land behave.<sup>146</sup> As Lord Blackstone once noted, there are important practical differences between optimal ways to treat things like land and things like water, and these practical differences make themselves known in the law.<sup>147</sup>

The phenomenon of digital communication is a *tertium quid* in property law if ever there was one. The electronic interplays that are captured under the rubric

142. See Rose, *supra* note 35, at 631 (“[P]roperty may be much more porous and changeable than is suggested by the assertion of simple exclusive dominion.”).

143. See Epstein, *Intellectual Property*, *supra* note 128, at 804-05 (noting that Blackstone’s “sole and despotic dominion” is an “exaggeration” and that “the old, tangible property” is exceedingly complicated in terms of entitlement structures) (quoting WILLIAM BLACKSTONE, 2 COMMENTARIES \*18 (1st ed. 2001)); *cf. id.* at 819 (stating that in the case of cyberproperty, “[t]here may well be a place for Blackstone’s sole and despotic dominion after all.”).

144. Carrier, *supra* note 140, at 52 n.216; see also Burk, *supra* note 23, at 20; Lemley, *supra* note 4, at 532-33.

145. Michael Carrier has observed this in his provocative response to the increasing “propertization” of the term “intellectual property.” See Carrier, *supra* note 140, at 8-12, 144-45 (sympathizing with those who wish to resist the expansion of intellectual property laws by avoiding the label of “property,” while arguing that the adoption of property rhetorics might open avenues to a desired weakening, rather than a feared strengthening, of private powers).

146. *Cf. McGowan, The Trespass Trouble*, *supra* note 2, at 110 (“[Cyberproperty critics claim] that ‘property rules’ have some unique or intrinsic relation to tangible things like dirt or disk space. Academic analysis of property abandoned this notion long ago. For many years, the dominant use of the term ‘property’ has referred to how people must deal with each other relative to some resource rather than to the resource itself.”).

147. As Blackstone put it:

For water is a moveable wandering thing, and must of necessity continue common by the law of nature. . . . But the land, which the water covers, is permanent, fixed, and immoveable: and therefore in this I may have a certain substantial property; of which the law will take notice, and not of the other.

BLACKSTONE, *supra* note 143, at \*18; see also Epstein, *Intellectual Property*, *supra* note 128, at 805 (discussing Blackstone’s views of water and noting that: “[T]he pressing question is to decide which analogies work across fields and which do not, both in litigation and, for that matter, in legislative reform.”).

of “cyberproperty” rights are far different things from the rich soil of the paradigmatic Blackacre. Different rules have historically been applied to land, to the valuable cattle<sup>148</sup> that constituted wealth during ages past,<sup>149</sup> to the water,<sup>150</sup> to the air,<sup>151</sup> and to other forms of “property.”

There are probably many ways to explain the close relation between cyberproperty claims and “law and economics” discourse, but I want to observe one connection that is both revealing and surprising. One of the most well-known formational moments in the rather brief history of cyberlaw was an address made in 1996 by Judge Frank Easterbrook of the Federal Court of Appeals for the Seventh Circuit to a conference on the *Law of Cyberspace*. Judge Easterbrook’s address was titled *Cyberspace and the Law of the Horse*.<sup>152</sup>

The conventional story of that day portrays Judge Easterbrook as a cynic and a spoiler attempting to throw a wet blanket on the whole enterprise of cyberlaw. Easterbrook told the assembled forward-thinking legal scholars to just go home and give up on this “cyberlaw” project.<sup>153</sup> Judge Easterbrook’s essay, recording his remarks, is often cited as a “but see” source in law review footnotes when an author needs to indicate that someone famously sought to cabin irrational enthusiasm about the novelty and importance of cyberlaw.<sup>154</sup>

Judge Easterbrook certainly did say some rather harsh things about the value of interdisciplinary law and technology scholarship. He warned, for instance, that: “Beliefs lawyers hold about computers, and predictions they make about new technology, are highly likely to be false. This should make us hesitate to prescribe legal adaptations for cyberspace. The blind are not good

148. As many teachers of first-year property law inform their students, the term “chattel” is thought to derive from the old French word for cows. SIR FREDERICK POLLOCK & FREDERIC WILLIAM MAITLAND, *THE HISTORY OF ENGLISH LAW BEFORE THE TIME OF EDWARD I*, at 151 (Cambridge Univ. Press 1968) (1895).

149. See generally Carrier, *supra* note 140, at 29-30; Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutory Impulse*, 78 VA. L. REV. 149 (1992); Mark A. Lemley, *What’s Different About Intellectual Property*, 83 TEX. L. REV. 1097 (2005).

150. Blackstone’s comments about water have found new purchase in the debate over cyberproperty. Epstein, *Intel v. Hamidi*, *supra* note 2, at 157 (predicting that “we can be confident that this [water] metaphor will fall stillborn from the press”); Lemley, *supra* note 4, at 538 (using Blackstone’s language to suggest the Internet is, in some ways, like flowing water).

151. Goodman, *supra* note 23, at 272, 364 (describing the conflict of analogies in spectrum law).

152. Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207.

153. *Id.* at 207 (“We are at risk of multidisciplinary dilettantism, or, as one of my mentors called it, the cross-sterilization of ideas. Put together two fields about which you know little and get the worst of both worlds.”); Lessig, *supra* note 133 (responding to Easterbrook by defending the study of cyberlaw).

154. See, e.g., John W. Bagby, *Cyberlaw: A Foreword*, 39 A. BUS. L. J. 521, 526 (2002); Chad J. Doellinger, *Recent Developments in Trademark Law: Confusion, Free Speech, and the Question of Use*, 4 J. MARSHALL L. REV. INTELL. PROP. L. 387, 393 (2005).

trailblazers.”<sup>155</sup> In a way, I would agree with Easterbrook. “Cybereconomic” arguments stand a great chance of being improvident, given all the unknown factors and dimly understood forms of social value that can be found at, in, and through computer networks.<sup>156</sup>

Yet strangely, Judge Easterbrook, speaking in 1996, was perhaps the earliest *proponent* of cyberproperty.<sup>157</sup> He explicitly advised judges to “[c]reate property rights, where now there are none . . . to make bargains possible.”<sup>158</sup> He meant this advice to apply specifically to the context of the Internet. Thus, according to Easterbrook himself, there was something new in cyberspace: new forms of property that had not yet been discovered. Accordingly, the judiciary should do something innovative: recognize it, so that the market might distribute it to more efficient uses. Easterbrook clearly believed that generating new cyberproperty rights and privately allocating those new rights through contractual transactions would lead to a better (more efficient) arrangement of Internet resources.<sup>159</sup> He stated, “we need to bring the Internet into the world of property law.”<sup>160</sup>

The particular kind of new cyberspace property that Judge Easterbrook had in mind that day was the domain name.<sup>161</sup> In subsequent years, courts and legislatures followed his advice: domain names are now generally recognized as a somewhat peculiar form of property right. The story of domain names has been told before, but it is worth recounting as a foil to the story of trespass to chattels laid out in Part I. Unlike the case with trespass to chattels, there is not much concern today with regard to the fact that domain names are considered a form of legal property. Rather, recent law review articles busily chart the interesting possibilities that flow from this classification. One such possibility is the prospect of judgment creditors seizing and selling the domain names of debtors.<sup>162</sup>

155. Easterbrook, *supra* note 152, at 207.

156. *Cf.* Frischmann, *supra* note 135, at 928, 932 (suggesting that economics theories may support commons-based approaches to Internet resource management).

157. The year 1996 was certainly a banner year for cyberproperty law. The *Thrifty-Tel* case, Trotter Hardy’s essay on trespass to websites, and Easterbrook’s statements were all published that year. This was also the year of John Perry Barlow’s “Declaration of Independence of Cyberspace” and David Johnson & David Post’s famous article “Law Without Borders.” David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367 (1996); John Perry Barlow, *A Declaration of the Independence of Cyberspace*, Feb. 8, 1996, <http://www.eff.org/~barlow/Declaration-Final.html>.

158. Easterbrook, *supra* note 152, at 212.

159. *Id.* at 212-13.

160. *Id.* at 212.

161. *Id.* (“Property rights in domain names is an example of what I have in mind.”).

162. *See, e.g.*, Alexis Freeman, L.L.M. Thesis, *Internet Domain Name Security Interests: Why Debtors Can Grant them and Lenders Can Take them in this New Type of Hybrid Property*, 10 AM. BANKR. INST. L. REV. 853, 854 (2002) (“After establishing that a domain name is property of the bankruptcy estate, and that a domain name registrant has a transferable property interest in a domain name, this article will discuss how a creditor may obtain and enforce a security interest in a domain

Domain names originated with some fairly straightforward connections to spatial territories. Physical jurisdictions were “mapped” onto the domain name system beginning in 1983. That was the time of the initial creation of various country-coded top-level domains (such as .uk for the United Kingdom).<sup>163</sup> With regard to certain top-level domains, such as the celebrated “dot-com,” new domain names were not keyed to territorial sovereigns. Instead, the domain names were handed out by private companies tasked with that role through a process that looked very much like a law of first possession.<sup>164</sup> In 1994, individuals could register whatever domain names they wanted on practically a first-come, first-serve basis.<sup>165</sup>

As Judge Easterbrook noted, “That led to people storing up domain names.”<sup>166</sup> This explosion in registrations, however, did not occur until fairly late in the 1990s. Even in 1994, the company tasked with registrations reported that only two or three people were in charge of approving domain name requests, and in 1993 they processed only about 300 registrations a month.<sup>167</sup> In 1994, a *Wired* journalist, Joshua Quittner, published an article in *Wired* with a subtitle stating: “Right Now There Are No Rules to Keep You from Owning a Bitchin’ Corporate Name as Your Own Internet Address.” To prove his point, he registered the domain name *www.mcdonalds.com* and attempted to sell it back to McDonalds Corporation, after informing them that the World Wide Web might be worth their attention.<sup>168</sup>

This all changed in short order when what amounted to a virtual land grab gave way to more formal and predictable distributional rules that were rooted in the logic of trademark law. This happened at roughly the same time that Judge Easterbrook delivered his address. Judge Easterbrook opined that, “[a]ppropriation of names and trademarks would not be tolerated in the rest of

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name.”); Juliet M. Moringiello, *Seizing Domain Names to Enforce Judgments: Looking Back to Look to the Future*, 72 U. CIN. L. REV. 95, 97 (2003) (“[C]ourts should allow judgment creditors to seize and sell domain names.”).

163. Peter K. Yu, *The Origins of ccTLD Policymaking*, 12 CARDOZO J. INT’L & COMP. L. 387, 390-92 (2004) (describing the early history of ccTLDs).

164. Easterbrook, *supra* note 152, at 212; *see also* Anupam Chander, *The New, New Property*, 81 TEX. L. REV. 715, 723-34 (2003) (describing the first-come, first-serve policy); Joseph William Singer, *Approaches to Teaching Property: Starting Property*, 46 ST. LOUIS U. L.J. 565 (2002) (explaining first possession and first capture theories of property rights).

165. *See* Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295, 1298-1306 (1998) (describing the historic evolution of the domain name system). In fact, *some* refusals to register domain names were made, but the basis of such refusals to register is unclear. *See* Joshua Quittner, *Billions Registered: Right Now, There Are No Rules to Keep You from Owning a Bitchin’ Corporate Name as Your Own Internet Address*, WIRED, Oct. 1994, at 50-51.

166. Easterbrook, *supra* note 152, at 212.

167. Quittner, *supra* note 165, at 50.

168. *Id.* at 50-51.

the commercial or political world; why so for Internet addresses?"<sup>169</sup> Trademark holders agreed and began bringing suits against people like Quittner for registering what they asserted were *their* domains. The practice of registering a domain that corresponded with the trademark of a third party was branded as "cybersquatting," a term obviously built upon an analogy to real property.<sup>170</sup>

Two 1996 opinions condemned the practice of cybersquatting as a violation of trademark law.<sup>171</sup> Three years later, Congress created a regulatory solution, the Anti-Cybersquatting Consumer Protection Act ("ACPA"), statutorily forbidding cybersquatting within the framework of trademark law.<sup>172</sup> The ACPA allowed for plaintiffs to proceed "in rem" to recover domain names, legislatively reifying the notion that domain names were a form of virtual property.<sup>173</sup>

Other members of the judiciary have shared Easterbrook's enthusiasm for "proportizing" the mixture of computer code and contract law that creates a domain name.<sup>174</sup> For instance, in the Ninth Circuit case of *Kremen v. Cohen*,<sup>175</sup> the plaintiff alleged that the defendant had stolen the domain name "sex.com" by filing a fraudulent transfer document with the domain name registrar. Rather than approach the claim as a matter of contract law, Judge Kozinski wrote for the Ninth Circuit in a decision that equated a plaintiff's original ownership of a domain name with a personal property interest.<sup>176</sup> Hence the problem of

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169. Easterbrook, *supra* note 152, at 212.

170. See Chander, *supra* note 164, at 726-27 (noting the connotations of "cybersquatting"); Epstein, *Cybertrespass*, *supra* note 2, at 83 (same).

171. See *Panavision Int'l, L.P. v. Toeppen*, 938 F. Supp. 616 (C.D. Cal. 1996), *aff'd*, 141 F.3d 1316 (9th Cir. 1998); *Intermatic Inc. v. Toeppen*, 947 F. Supp. 1227 (N.D. Ill. 1996).

172. See 15 U.S.C. § 1125(d) (2000). This statute effectively provided a new cause of action (generally sounding in trademark and placed within the trademark statutes) under which the cybersquatting claims could be brought. See *id.* Cybersquatting is generally doing exactly what Quittner did in 1994—buying a domain name that rightfully belongs to someone else with the intent to sell it for a profit. The difficult question is in trying to decide who is entitled to "own" a particular name where there are multiple legitimate candidates. See, e.g., *Nissan Motor Co. v. Nissan Computer Corp.*, 378 F.3d 1002 (9th Cir. 2004) (pitting earlier registrant Uzi Nissan against the better-known car company); *Virtual Works v. Volkswagen*, 238 F.3d 264 (4th Cir. 2001) (holding that the registration of the domain name "vw.net" was in "bad faith" in large part because the registrants, Virtual Works, were aware that "VW" was a Volkswagen trademark).

173. See 15 U.S.C. § 1125(c)(1)-(3) (2000); *but see* Fairfield, *supra* note 2, at 1055 n.30 (suggesting that the ACPA's statutory placement in trademark law undermines the property analogy).

174. See Dan Hunter, *Culture War*, 83 TEX. L. REV. 1105, 1107 (2005) (explaining the ascendancy, in the late twentieth century, of economies based on intangible interests); Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age*, 66 LAW & CONTEMP. PROBS. 89, 95 (2003) (noting how intellectual property law subverts the expectations that some classes of things are inherently incapable of private ownership).

175. 337 F.3d 1024, 1026-27 (9th Cir. 2003).

176. *Id.* at 1030. Judge Kozinski stated: "Like a share of corporate stock or a plot of land, a domain name is a well-defined interest. . . . [L]ike other forms of property, domain names are

intangibility in the tort of conversion (which led to the *Thrifty-Tel* decision) was waved away without a backward glance.<sup>177</sup> The *Kremen* decision, as Judge Kozinski noted, was consistent with the “in rem” provisions of the ACPA.<sup>178</sup>

Legal scholars like Anupam Chander have since defended the equation of domain names with property interests, rather than with contracts or technologies.<sup>179</sup> Says Chander: “What are domain names anyway? . . . [E]ven though domain names involve both technology and contract, domain names are better understood as a new form of property arising in the Information Age.”<sup>180</sup>

How does the story of domain names relate to the broader notion of cyberproperty rights? In this regard, it is worth considering the recent work of Professor Joshua Fairfield, one proponent of cyberproperty. Fairfield is an advocate of Demsetzian theory and a critic of the *Hamidi* decision.<sup>181</sup> Fairfield argues that when computer code functions in ways that create rivalrous and persistent property-like interests, property concepts might well be employed to step in and resolve disputes where intellectual property concepts currently fail to reach.<sup>182</sup>

Fairfield, however, adds an interesting twist to his argument. In his view, virtual property rights should be theoretically *disconnected* from private rights in computer chattels.<sup>183</sup> The domain name story recounted above actually is much more consistent with Fairfield’s vision than it is with the more standard cyberproperty vision that connects the right with a more expansive property interest in chattel ownership. The legal modifications made to the domain name system have so far intruded upon the default rights that certain private actors have with regard to the way certain information is arranged on their computers.<sup>184</sup>

Fairfield argues that the owner of a virtual property may or may not be the

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valued, bought and sold, often for millions of dollars, and they are now even subject to in rem jurisdiction.” *Id.* (citation omitted). The other judges on the *Kremen* panel were apparently more cautious about propertizing domain names in this way. *See Kremen v. Cohen*, 314 F.3d 1127 (9th Cir.) (certifying the conversion question to the California Supreme Court), *revised and superseded*, 325 F.3d 1035 (9th Cir.), *aff’d in part, rev’d in part*, 337 F.3d 1024 (9th Cir. 2003); *id.* (Kozinski, J.) (arguing that certification was not necessary).

177. *Id.* Most commentators to address the issue so far have seemed bullish about scrapping the tangibility requirement in conversion law. *See, e.g.*, Richard A. Epstein, *The Roman Law of Cyberconversion*, 2005 MICH. ST. L. REV. 103, 112 (noting that the case raises “the question of whether domain names lose their status as a protectable form of property given their irreducibly intangible nature” but quickly concluding “I shall not dwell on this issue at any length because Kozinski’s point seems largely irrefutable.”).

178. *Kremen*, 337 F.3d at 1030.

179. *See, e.g.*, Chander, *supra* note 164.

180. *Id.* at 771; accord Fairfield, *supra* note 2, at 1052 (arguing that online property rights are needed to balance regimes based on pure contract).

181. Fairfield, *supra* note 2.

182. *Id.* at 1075.

183. *Id.* at 1075, 1078.

184. *Am. Online v. Chi-Hsien Huang*, 106 F. Supp. 2d 848 (E.D. Va. 2000).

proper owner of either the computer on which that code resides or the owner of the intellectual property rights to the software that gives rise to the virtual property. His arguments map well to the legal result in *Kremen*—where the domain name “owner” had neither IP rights to the code in question, nor owned the relevant chattels on which the code resided.<sup>185</sup>

Again, note the important difference here between Fairfield’s view and the view of other cyberproperty proponents. Even standing firmly within a traditional Chicago school economic framework, as Fairfield does, one can find reasons to agree with the *Hamidi* majority, at least insofar as it refused to extend the doctrine of cyberproperty to protect the owners of *chattels*. In other words, Easterbrook may have been right that there is a place for new property-like rights “in cyberspace” generally.<sup>186</sup> According to Fairfield, however, locating those property rights exclusively in the hands of chattel owners is not efficient.

Fairfield also carefully limits his claim to online resources that are coded as “rivalrous,” meaning that they will not have value when possessed by multiple parties.<sup>187</sup> While this is true of domain names (an address is not valuable if it is shared), the information on a typical website does not satisfy Fairfield’s requirement. With regard to typical information resources, a broader critique is to be made of the dubious benefits of privatization.

One can find the critique of privatizing digital information, oddly enough, coming from within the Chicago school. Saul Levmore, the current dean of the University of Chicago Law School, recently noted that the entire Demsetzian story of privatization might be viewed with justifiable skepticism, telling a story of capture by private interests rather than a story about the natural evolution toward efficiency.<sup>188</sup> Even if the claims of Demsetz were descriptively valid with regard to the historic evolution of private property rights in land, information resources are likely to work in different ways than land resources.<sup>189</sup> Just as, according to Blackstone, land and water should be treated by different legal

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185. *Kremen*, 337 F.3d at 1026-27.

186. Easterbrook, *supra* note 152, at 210-12.

187. Fairfield, *supra* note 2, at 1052-53.

188. Saul Levmore, *Property’s Uneasy Path and Expanding Future*, 70 U. CHI. L. REV. 181, 188-89 (2003) (“[T]he picture is much less sanguine than the one usually painted with the commons receding in the background and hard-working tillers of land dominating the foreground.”); *see also* Goodman, *supra* note 23, at 278 (describing the difficult debates over whether property is a fit model for the use of electromagnetic spectrum); Robert P. Merges, *Intellectual Property Rights and the New Institutional Economics*, 53 VAND. L. REV. 1857, 1868 (2000) (describing how interest group capture rivals Demsetzian spontaneous evolution as a theory explaining the historic creation of new property laws).

189. Arguably, one can also see this trend away from (blunt) property rights in intellectual property law. *See* Brett M. Frischmann, *Evaluating the Demsetzian Trend in Copyright Law*, Nov. 28, 2005, <http://ssrn.com/abstract=855244>; Joseph P. Liu, *Regulatory Copyright*, 83 N.C. L. REV. 87, 92 (2004) (describing how copyright has transitioned from a property rights regime toward a regulatory regime); Merges, *supra* note 188, at 1875 (explaining contemporary reactions against the ‘statutorification’ of intellectual property law).

regimes, the optimal structure of software and information regimes are likely to be somewhat different.<sup>190</sup>

Many claims of cyberproperty would seem to assume that the information and computer code present on networked systems can be made more socially beneficial through the creation of legal regimes of exclusion. Yet with regard to the best resource model for software development, Levmore calls “appealing” the claim that non-proprietary models enable more efficient production and have been responsible for “sustained and impressive innovation.”<sup>191</sup> If one couples these impressions with Fairfield’s arguments, it would seem hardly a radical notion that we might do well to be skeptical of any blind faith in the efficiency of new cyberproperty rights placed in the hands of chattel owners.<sup>192</sup> One might find an “anti-commons” property regime emerging in cyberspace, but one need not do so in order to reject calls for the expansion of trespass to chattels doctrine.<sup>193</sup> One simply need question the original conviction that privatizing valuable resources is always the best way to achieve social progress.

All privately created value does not merit the label of property.<sup>194</sup> When Judge Easterbrook spoke, there seemed to be a conventional wisdom among those who set Internet policy that the law was far too lax in creating and

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190. The obvious economic issue with the generation of cyberproperty rights is the increased transaction costs created by legal entitlements and the resultant decrease in greater network benefits that stem from free information flow—this issue was noted by the court in *Hamidi*. *Intel Corp. v. Hamidi*, 71 P.3d 296, 310-11 (Cal. 2003). But there are many other significant economic angles one might use to critique cyberproperty enthusiasm. The works of Henry Smith and Brett Frischmann are particularly enlightening in trying to think through cyberproperty economics. Smith’s work reveals the complexity of the issue and some of the shortcomings of common economic assumptions. See Henry E. Smith, *Self-Help and the Nature of Property*, 1 J.L. ECON. & POL’Y 69, 71, 97-101 (2005). Frischmann’s work is more directly relevant to the economic debates. Explaining the economic dimensions of infrastructures and commons, Frischmann challenges common assumptions associated with faith in privatization as a remedy. See, e.g., Frischmann, *supra* note 135, at 919, 926-27 (explaining the benefits of open access to certain resources); *id.* at 928 (stating that information and Internet resources are examples of nontraditional infrastructure resources).

191. Levmore, *supra* note 188, at 185.

192. Frischmann, *supra* note 135, at 936 (advocating, from an economic efficiency perspective, for open access regimes with regard to Internet infrastructure resources).

193. Dan Hunter has argued that expansive cyberproperty rights will create an anti-commons arrangement. See Hunter, *supra* note 4, at 439. On the concept of the anti-commons generally, see Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 675 (1998).

194. See *INS v. Assoc. Press*, 248 U.S. 215, 250 (1918) (Brandeis, J., dissenting) (“[T]he fact that a product of the mind has cost its producer money and labor, and has a value for which others are willing to pay, is not sufficient to ensure to it this legal attribute of property.”). Of course, further complicating this is the fact that the law inevitably creates value when it recognizes a thing as property—leading to the traps of tautological reasoning. See Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 815 (1935).

protecting property rights on the Internet. Policymakers believed that if new and strong online property rights were not created, the Internet would prove to be a barren wasteland.<sup>195</sup> Yet the resulting years have shown that in the absence of strong property protections, the Internet has become socially productive in ways that have transformed society and defied any conventional economic wisdom.

As David Post said five years ago, “[C]yberspace keeps growing and growing; more and more stuff keeps appearing in new guises and new shapes; there are more and more people trying to give me information to place in my computer than I have room for.”<sup>196</sup> This description seems equally apt today. In the absence of cyberproperty rights, the feared tragedy of the commons in cyberspace has turned out to be largely a comedy, disproving the conventional Demsetzian wisdom of the need for privatization.<sup>197</sup> As David Post once summarized the problem, perhaps we need to restrain the urge of law-makers and legal scholars to “fix” things that are not broken. And perhaps we should be doubly hesitant when those people most eager to do the fixing are those most committed to theories that the unbroken things are disproving.<sup>198</sup>

Before moving on to the next section, I should emphasize that this discussion of cyberproperty’s “law and economic” moorings is being offered mainly to show that, even within the circles of those who have faith in the explanatory power of Demsetzian theories, the case for cyberproperty is extremely weak. With that said, it is worth noting that not everyone shares the faith of Demsetz in the virtues of privatization. The “property” component in cyberproperty generally purports to be based on one flavor of economic analysis that, when closely considered, does not generally support the case for cyberproperty.<sup>199</sup> Yet by emphasizing this shortcoming, I risk implying that some more sophisticated form of law and economics reasoning ought to dominate debates over cyberproperty. This is certainly not my belief. Indeed, the stakes at risk in the regulation of information networks include numerous rights and human values that are hard to reconcile with the purely economic analysis of law. Rights-based and humanistic approaches to property law, for instance, are often in tension with Chicago School reasoning.<sup>200</sup> I give primary emphasis here to the fallacies of

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195. David G. Post, *His Napster’s Voice*, 20 TEMP. ENVTL. L. & TECH. J. 35, 49 (2001).

196. *Id.* at 43.

197. *See generally* Rose, *supra* note 135, at 717-20.

198. *See* Post, *supra* note 195, at 43.

199. *See* Carol M. Rose, *Introduction: Property and Language, or, the Ghost of the Fifth Panel*, 18 YALE J.L. & HUMAN. 1, 16-18 (2006) (explaining how Demsetzian theories seem generally inappropriate when applied to the regulation of avenues of commerce and communication).

200. Economics can certainly be a useful tool for legal policy-making, but it is well understood that economic analysis fails miserably when it is offered as a totalizing framework for legal discourse. *See, e.g.*, Julie E. Cohen, *The Place of the User in Copyright Law*, 74 FORDHAM L. REV. 347, 352 (2005) (“Responsible economic theorists recognize that defining a social utility function always requires a priori resolution of certain normative questions.”); Kimberly Kessler Ferzan, *Some Sound and Fury from Kaplow and Shavell*, 23 L. & PHIL. 73, 102 (2004) (explaining how

cyberproperty within the standard Chicago School thinking in order to demonstrate how, even on cyberproperty's "home turf," its logic fails. When considered outside its home turf by those who would resist the vision of Demsetz, enthusiasm for cyberproperty is even more suspect.<sup>201</sup>

### B. Decoding "Code is Law"

In the past section of this Article, I explained that cyberproperty proponents err by assuming that "cyberproperty" is not significantly different than land for the purposes of legal regulation. Instead, computer resources may constitute an exceptional type of legal object, making the extension of the laws of real and chattel property to their protection ill-advised. This section argues against a second type of exceptionalism. The concern is that, to some extent, cyberproperty proponents rely upon the well-known argument (well-known in cyberlaw circles, at least) that "code is law."

"Code is law" is popularly associated with law professor Lawrence Lessig, and particularly with his 1999 book *Code and Other Laws of Cyberspace*.<sup>202</sup> As Lessig acknowledges, however, the idea was initially sketched in another book, *City of Bits*. *City of Bits* was written in 1995 by William Mitchell, Dean of the School of Architecture and Planning at the Massachusetts Institute of Technology.<sup>203</sup> In his book, Mitchell attempted to generally describe the digital "architectures" created in cyberspace.<sup>204</sup> Mitchell suggested that "on the electronic frontier, code is the law."<sup>205</sup>

*City of Bits* was an influential text in the cyberlaw community—within a few years of its publication, legal scholars including Lessig, Ethan Katsch, Joel Reidenberg, and James Boyle were busy grappling with the implications of code replacing law.<sup>206</sup> However, it was Lessig's book that provided the most thorough

welfare theories premised on economic reasoning fail to explain criminal law, which is premised on, among other things, principles of fairness).

201. See, e.g., Cohen, *supra* note 134 (challenging the desirability of grand theories of cyberspace); Margaret Jane Radin, *A Comment On Information Propertization and Its Legal Milieu*, 54 CLEV. ST. L. REV. 23, 38-39 (2006) (commenting on the *Hamidi* case and suggesting that competition and free speech policy should play a greater role in debates over information propertization).

202. LESSIG, *supra* note 7, at 6 ("Code is law." (emphasis in original)).

203. *Id.* at 6, 241 n.7 ("In much of this book, I work out Mitchell's idea. . . ."); WILLIAM MITCHELL, *CITY OF BITS: SPACE, PLACE, AND THE INFOBAHN* (1995).

204. Hunter, *supra* note 4, at 442, 455, 500 (using Mitchell's work to inform arguments about the spatial claims made of cyberspace).

205. MITCHELL, *supra* note 203, at 111.

206. See, e.g., James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty, and Hardwired Censors*, 66 U. CIN. L. REV. 177 (1997); M. Ethan Katsch, *Software Worlds and the First Amendment: Virtual Doorkeepers in Cyberspace*, 1996 U. CHI. LEGAL F. 335; Lawrence Lessig, *Reading the Constitution in Cyberspace*, 45 EMORY L.J. 869 (1996); Joel R. Reidenberg, *Governing Networks and Rule-Making in Cyberspace*, 45 EMORY L.J. 911 (1996); Joel R.

investigation of the concept and brought the notion that “code is law” to prominence among legal scholars. The impact of “code is law” among some legal scholars has been substantial. Professor Polk Wagner, for instance, has stated that “code is law” is the “most significant principle to emerge from the academic study of law on the Internet.”<sup>207</sup>

Yet, despite the importance of the concept, many commentators seem less than sure what “code is law” means.<sup>208</sup> Those who endeavor to explain the slogan, in fact, generally describe the claim as its opposite—that code is *not* law, but something as powerful and significant as law.<sup>209</sup> A quote from Anupam Chander exemplifies how “code is law” is most commonly framed by those familiar with Lessig’s writing: “As Lawrence Lessig informs us, markets, architecture, and social norms can regulate behavior, sometimes as well as or better than law.”<sup>210</sup> So, in other words, code (the word “architecture” stands in for “code” in the previous sentence) is like law, but opposed to law. In a later summary of his intent, Lessig explains that he meant the equation of code and law as a poetic provocation.<sup>211</sup> He states: “[C]ode controls behavior as law might control behavior: You can’t easily rip the contents of my DVD because the code locks it tight. The code functions as a law might function: Telling the user what she can and cannot do.”<sup>212</sup>

Yet while locks and laws control behavior, locks are, of course, not laws. As James Grimmelman explains, “code is law” is, therefore, a somewhat misleading slogan.<sup>213</sup> For Lessig, code is digital “architecture” that does the work of law, but is not law, *qua* law.<sup>214</sup> Most scholars working out “code is law” concepts today, such as James Gibson, James Grimmelman, Polk Wagner, and Tim Wu, agree with Lessig that code is challenging legal ordering.<sup>215</sup> Yet they

Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553 (1998).

207. Wagner, *supra* note 2, at 459.

208. See, e.g., Orin S. Kerr, *The Problem of Perspective in Internet Law*, 91 GEO. L.J. 357, 369-71 (2003) (analyzing the meaning of the phrase); Joseph H. Sommer, *Against Cyberlaw*, 15 BERKELEY TECH. L.J. 1145, 1195-96 (2000) (arguing that if code is law, so are airports); Tim Wu, *When Code Isn’t Law*, 89 VA. L. REV. 679, 681 (2003) (stating that “what this really means remains extremely vague”).

209. For instance, Polk Wagner generally stresses the operative *differences* between law and software as modalities of regulation, noting how law and software are *not* equivalents. Wagner, *supra* note 2, at 459, 461, 474.

210. Chander, *supra* note 164, at 773 (citing LESSIG, *supra* note 7, at 87).

211. See Lawrence Lessig, Symposium, *Cyberspace and Privacy: A New Legal Paradigm?* Foreword, 52 STAN. L. REV. 987, 990 (2000).

212. *Id.* (“I meant [“code is law”] originally in a metaphorical sense. . . .”).

213. Grimmelman, *supra* note 12, at 1727. Grimmelman notes that the phrase, while “pithy,” has forced many who have benefited from Lessig’s insights to rhetorically reject his equation. *Id.*

214. *Id.* at 1721, 1726.

215. See, e.g., James Gibson, *Re-Reifying Data*, 80 NOTRE DAME L. REV. 163 (2004);

mostly distance themselves from the phrase “code is law” by stating that code is actually *not* law—which, it turns out, is what Lessig was saying.

Scholars might ask, then, given the sophistication of his discussions of the interplay of code and law, why Lessig decided to emphasize the misleading slogan “code *is* law” when he actually saw code as something that threatened to undermine the rule of law.<sup>216</sup> There are several good reasons why Lessig pushed “code *is* law,” but the most obvious answer is the political context in which *Code* was written. Lessig wanted his readers to take his claims about the threats posed by the unconstrained social regulatory powers of software more seriously. His “code is law” rhetoric was a rhetoric designed with a particular political agenda in mind and a particular audience. Conflating code and law created a challenge to certain important political stakeholders.

If code became law, the legislature and judiciary would perceive that their social power—the power of law to control society—was slipping in favor of the “coded” regulatory powers of companies like Microsoft and America Online. Another audience would also be disturbed by the equation: so called “cyber-libertarians” who believed that the best course of future action would be to keep the state away from cyberspace and to promote the freedom of technological power. Lessig thought this faith in the libulatory power of the “invisible hand” of markets and technology was, at base, naïve.<sup>217</sup> He feared that a society governed largely by computer code and markets would ultimately fail to reflect the constitutional commitments found in our democratic system of government.<sup>218</sup>

Lessig hoped that, by challenging both the government and the entrenched cyber-libertarians with “code is law,” he might convince them to be more proactive with lawmaking in response to the social transformations brought about by the Internet.<sup>219</sup> The power of law, he hoped, might counteract the perceived anti-democratic and unconstrained effects of software regulation, “reading the constitution onto cyberspace,” so to speak.<sup>220</sup>

So “code *is* law” rather than “code is *not* law” was part of a calculated rhetorical move to throw two parties in each other’s conceptual orbits. For many, this actually worked: an impressive feat in a book that was both informative and entertaining. *Code* led the typical reader to realize that the choice confronted was not between sovereign or no sovereign, but between the sovereignty of

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Grimmelmann, *supra* note 12; Wagner, *supra* note 2; Wu, *supra* note 208.

216. See Lessig, *supra* note 133, at 543 (“Law, I have argued, is vulnerable to the competing sovereignty of code. Code writers can write code that displaces the values that law has embraced. And if the values of law are to survive, law might well have to respond.”); Lawrence Lessig, *Law Regulating Code Regulating Law*, 35 LOY. U. CHI. L.J. 1, 1 (2003) [hereinafter Lessig, *Law Regulating Code*] (looking at how “law and technology interact”).

217. LESSIG, *supra* note 7, at 234.

218. Lessig’s views on this were put most succinctly in his concluding chapter, “What Declan Doesn’t Get,” where he criticized journalist Declan McCullough for failing to see the danger of completely removing the government from technological regulation. *Id.* at 231-34.

219. *Id.*; Gibson, *supra* note 215, at 196-97.

220. Lessig, *supra* note 211.

government or the sovereignty of technological power. *Code*, unlike the majority of books published by legal scholars, was enthusiastically received, reviewed, and praised far outside the traditional confines of the legal academy. It certainly shaped the way many people think about the Internet and law today, and it captured and articulated some of the central features that make cyberlaw and cyberspace unique.<sup>221</sup>

Yet, while I am comfortable praising *Code*, there are a few things about it that actually explain, I think, the expansion of cyberproperty. *Code* can be read as a fairly exceptionalist account of the social impact of particular technologies, and, in particular, an exceptionalist account that seems very comfortable with language that describes cyberspace as a “place” or “space.”<sup>222</sup> There are really two issues here: the first is that the insistence in *Code* that cyberspace is a “space” rather than an automated process of information exchange. The “spatial” metaphors in *Code* are, as Dan Hunter notes,<sup>223</sup> entirely consistent with the zeitgeist when it was written, but they tend to lead to a conflation of cyberspace with spatial property. This, in turn, is used as support for claims of cyberproperty, a phenomenon discussed in the preceding section.

The second issue is the trope found in *Code* of equating the power of code with the power of law. Lessig’s stated goal of replacing the “architectural” rules that flow from markets and technology with more democratically-oriented legal rules,<sup>224</sup> combines synergistically with the first issue to make cyberproperty doctrines seem like an appealing innovation. Rather than having non-democratic technology and the unconstrained power of markets regulating new spaces, *Code* can be read to suggest that we should look to new legal property rights to promote efficiency and justice.

To make my concern more clear, one should consider the brief treatment in *Code* of “trespass law in cyberspace.”<sup>225</sup> Lessig states that Harold Reeves, his former research assistant, proposed to him that “‘owners’ of space in cyberspace” should have “no legal protection against invasion.”<sup>226</sup> Reeves argued that instead, those wishing to protect “cyberspace” holdings should be required to rely on technologies of exclusion. Lessig’s reaction was that Reeves’s idea was “a bit nutty, and in the end, I think, wrong.”<sup>227</sup>

Consistent with his thesis in *Code*, Lessig advocated for the deployment of law as an ordering mechanism in this instance. He analogized the issue to the problem of a farmer wishing to protect land. The choices, he said, were between

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221. See, e.g., LESSIG, *supra* note 7, at 11-13 (discussing virtual worlds).

222. See generally Cohen, *supra* note 134 (criticizing cyberlaw scholars for failing to grapple with the complexity of space and place).

223. Hunter, *supra* note 4, at 442-44.

224. LESSIG, *supra* note 7, at 233-34.

225. See *id.* at 122-24.

226. *Id.* at 122.

227. See *id.*; see also Harold Smith Reeves, Comment, *Property in Cyberspace*, 63 U. CHI. L. REV. 761 (1996).

private fences and laws.<sup>228</sup> According to Lessig, the correct solution would not depend wholly upon technology, but would mix some degree of private fencing and some degree of trespass law. “From a social perspective,” said Lessig, “we would want the mix that provides optimal protection at the lowest cost.”<sup>229</sup> This sounds rather close to the recent arguments of Patricia Bellia and Polk Wagner for the merits of cyberproperty regimes.<sup>230</sup>

Though Lessig’s more recent statements indicate that he opposes the expansion of cyberproperty,<sup>231</sup> the above passage from *Code* seems to animate some contemporary arguments for cyberproperty. If technological blocking is tantamount, via “code is law,” to a legal right to exclude, then perhaps it would be wise to consider a legal regime of property-based exclusions as an alternative to technological power.<sup>232</sup> Perhaps, as Lessig said earlier, some mix of legal and technological exclusion rules might be the optimal way to approach trespass law in cyberspace.<sup>233</sup>

We should, of course, consider whether the law should respond to new technologies. With regard to technologies of network exclusion, the law can provide a multitude of different responses: it might offer legal alternatives to the powers of exclusion, it might legally prohibit technological exclusion, or it might ignore the new technological power altogether. We cannot simply presume that one of these options is the correct course of action from the standpoint of optimal policy. Law and technology dance together in complicated ways, and they have been doing this dance for a long time.<sup>234</sup>

Cars, for instance, are not laws. Car ownership gives the owner the technological ability to drive quickly and endanger the lives of others. However, the law intrudes, to curb the right to exercise technological power (via speed limits), to regulate who can exercise that power (by licensing), and to provide special civil penalties for failing to follow social directives regarding the use of the power (e.g. driving while intoxicated).

The battles between legal power and technological power began long before the creation of the Internet or the automobile.<sup>235</sup> Inventions are often sources of

228. LESSIG, *supra* note 7, at 122.

229. *Id.*

230. Bellia, *supra* note 2, at 2194; Wagner, *supra* note 2, at 496-98.

231. LESSIG, *supra* note 87, at 170 (“[W]hile my bias is with Burk, I don’t mean to deny the plausibility of a different regime.”); Lemley, Brief in Support of Appellant, *supra* note 86.

232. Bellia and Wagner both acknowledge that law might be used to disable some blocking efforts, but both concentrate primarily on correlating law with technologies of exclusion, not intrusion. See Bellia, *supra* note 2; see also Wagner, *supra* note 2.

233. This argument has been recently echoed by Wagner. See Wagner, *supra* note 2, at 498 (arguing for “more law and less software”).

234. As Julie Cohen notes in a forthcoming article, cyberlaw scholars stand to benefit from a deeper partnership with science and technology (STS) studies, which investigates the social and historical impact of technological artifacts from a sociological perspective. See Cohen, *supra* note 134, at 39-41.

235. Richard A. Epstein, *Before Cyberspace: Legal Transitions in Property Rights Regimes*,

new laws, both common and statutory.<sup>236</sup> New technologies confront society with questions of whether the shifts in power they create should be left unchecked or should be “remedied” by the state as a regulator. Indeed, we might go as far back as Hobbes, Bentham, or Locke (or beyond) to investigate the interplay of law and technology. The state itself, arguably, is merely a response to what would be default or “natural” technological orderings.<sup>237</sup> Justice Cardozo remarked, in an earlier day, about how the steamship, the telegraph, and the telephone had all changed both society and the law.<sup>238</sup>

However, in *Code*, Lessig seemed intent, for reasons described above, on setting code apart and resisting the conflation of code with other more “primitive” technologies.<sup>239</sup> Lessig suggested that the architecture of code was somehow qualitatively new.<sup>240</sup> At one point, he suggested that his argument was at risk if the reader thought the technology of code was similar to the technology

73 CHI.-KENT L. REV. 1137, 1153-54 (1998) (“The question of whether new technology requires alteration of old rules is itself an old question that is insufficiently studied. It is not a new question that requires us to start from scratch.”). I should emphasize that Lessig’s own work is consistent with this. In his articles and books, Lessig often offers anecdotes about the history of technological transformations as entry points in order to view current cyberlaw problems—he clearly appreciates the similarity of computer code and other technologies. *See, e.g.*, LESSIG, *supra* note 7, at 92 (discussing speed bumps); *id.* at 111 (discussing the telephone).

236. *See generally* Epstein, *supra* note 235; *see also* Keith Aoki, (*Intellectual*) *Property and Sovereignty: Notes Toward a Cultural Geography of Authorship*, 48 STAN. L. REV. 1293, 1333 (1996) (“Unquestionably, new technologies challenge legal paradigms.”); Epstein, *Cybertrespass*, *supra* note 2, at 75 (noting how new technology changes law); Michael L. Rustad & Thomas H. Koenig, *Cybertorts And Legal Lag: An Empirical Analysis*, 13 S. CAL. INTERDISC. L.J. 77, 77-78 (2003) (noting a 1936 article in *Law and Contemporary Problems* describing how the common law of torts was adapting to the invention of the automobile).

237. In his argument for legal recognition of online property, I. Trotter Hardy characterizes Bentham as claiming that law operates in this way. *See* Hardy, *supra* note 2, ¶ 31.

[B]entham was concerned that absent a law of property, individuals would try to use technological means (locks, guns, fences, etc.) to protect what they had amassed. It would be this sense of technological ownership that would be subject to a sense of insecurity because superior technological force could always overcome it. Legal protection would provide the security and sense of ownership that these technological means could not provide.

*Id.* Of course, it isn’t clear how the technology of the gun differs from the “technology” of the stick and stone—hence we could draw these thoughts about law and technology all the way back to questions about law and the state of nature. Regarding the theories of Hobbes and Locke, *see* Richard A. Epstein, *The Theory and Practice of Self-Help*, 1 J.L. ECON. & POL’Y 1 (2005) (discussing how theories of law make presumptions about potentials for human behavior in the state of nature.)

238. CARDOZO, *supra* note 1, at 61.

239. LESSIG, *supra* note 7, at 19-20 (stating that regulation in “Avatar space” is special).

240. *Id.*

of airplanes.<sup>241</sup>

The early history of the airplane, however, is a wonderful story about the interplay of technology and law. Much like the early Internet, aviation saw substantial government involvement—and military involvement especially. The first extended manned flight of an airplane took place on December 17, 1903.<sup>242</sup> Less than five years after Kitty Hawk, the first U.S. military aviation casualty occurred when Orville Wright crashed his plane in a demonstration at Fort Myer, injuring himself and killing Lieutenant Thomas E. Selfridge of the U.S. Signal Corps.<sup>243</sup> The next year, the Wright brothers were awarded a military production contract.<sup>244</sup>

In 1915, the United States National Advisory Committee for Aeronautics (the ancestor of NASA) was established in order to federally promote the progress of aviation science.<sup>245</sup> By this time, small scale commercial air service had begun in the United States. Military warplanes were also in combat use across the European theatre.<sup>246</sup> Lawyers tagged right along with these developments. State legislatures quickly began to regulate the technology and practice of air travel. In 1921, less than two decades after Kitty Hawk, the legal regulation of the air had progressed far enough that Justice Cardozo, in *The Nature of the Judicial Process*, remarked upon a “body of legal literature that deals with the legal problems of the air.”<sup>247</sup>

Five years later, and just a little more than two decades after Kitty Hawk, the Air Commerce Act of 1926 established comprehensive federal regulation for the new technology, which evolved, over time, into the regulatory apparatus we know as the Federal Aviation Administration.<sup>248</sup> Aviation regulations now proscribe the technology of mechanized flight in minute detail.<sup>249</sup> While notions of striated airspace, licensing, and mandatory technologies may seem like common sense arrangements today, the policy of airplanes evolved through a

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241. *Id.* at 221 (stating that he expects lawyers to object that “[c]ode is not law, any more than the design of an airplane is law”).

242. T.A. HEPPENHEIMER, *A BRIEF HISTORY OF FLIGHT: FROM BALLOONS TO MACH 3 AND BEYOND* 51-53 (2001). As Heppenheimer’s book demonstrates, the work of the Wrights really deserves to be placed in a much longer history of aeronautic aspirations and attempts (including those of Cayley, Lilienthal, and Langley)—but since this is a brief digression, only Kitty Hawk will be mentioned.

243. HERBERT A. JOHNSON, *WINGLESS EAGLE: U.S. ARMY AVIATION THROUGH WORLD WAR I* 29 (2001).

244. GRETCHEN WILL MAYO, *THE WRIGHT BROTHERS* 33 (2003).

245. PATRICK EVANS-HYLTON, *AVIATION IN HAMPTON ROADS* 61 (2005).

246. *See* *THE AEROSPACE ENCYCLOPEDIA OF AIR WARFARE: VOLUME ONE 1911-1945*, at 7-10 (1997).

247. CARDOZO, *supra* note 1, at 61; *cf.* Kerr, *supra* note 208, at 387 (noting that the problem of analogical reasoning with regard to technology is not specific to the Internet and discussing Justice Cardozo’s opinion in *McPherson v. Buick Motor Co.*, 111 N.E. 1050 (N.Y. 1916)).

248. Air Commerce Act of 1926, Pub. L. No. 69-254, 44 Stat. 568 (1926).

249. *See generally* 14 C.F.R. § 1 (2006).

process that demanded considerable judicial creativity. As property scholar John Cribbet has noted, however, there was nothing simple about the interplay of law and aviation technology.<sup>250</sup> “[A] wholly new concept to respond to developing technology” was required, one that looked to a “broader social-framework.”<sup>251</sup>

This is what we have seen so far in the path of cyberlaw. An ever-growing body of software-specific federal and state legislation is being created in response to the spread of computer networks and software technologies; state laws lead and federal laws attempt to harmonize state experiments. For instance, computer hacking legislation was enacted long before “cyberlaw” *per se* was recognized as a legal subject.<sup>252</sup> The Department of Justice added a division specifically tasked with addressing computer crimes<sup>253</sup> at roughly the same time William Mitchell published *City of Bits*.<sup>254</sup> Today, cyberlaw casebooks cut across a wide variety of disciplines: intellectual property, speech torts, computer viruses, computer hacking, personal jurisdiction, and electronic contracting. “Spam,” the bane that, in part, gave birth to cyberproperty, is the subject of targeted legislation.<sup>255</sup> It is safe to assume that cyberlaw in the future will continue to grow in size and significance, responding to the escalating power and social distribution of digital technologies.

In his most recent book, *Free Culture*, Lessig leads with a story about how airplanes changed the common law—and the law of trespass in particular.<sup>256</sup> Lessig notes how the U.S. Supreme Court, in *United States v. Causby*,<sup>257</sup> eviscerated an ancient maxim of real property trespass law—the ownership of land from the depths to the heavens—in light of the social benefits provided by airplanes.<sup>258</sup>

250. John Edward Cribbet, *Concepts in Transition: The Search for a New Definition of Property*, 1986 U. ILL. L. REV. 1.

251. *Id.* at 20-21.

252. See Kerr, *supra* note 32, at 1602 (“Computer crime statutes were first enacted in the late 1970s in response to perceived failures of preexisting laws to respond to computer misuse.”); see also Susan W. Brenner, *State Cybercrime Legislation in the United States of America: A Survey*, 7 RICH. J.L. & TECH. 28, \*15 n.37 (2001), available at <http://law.richmond.edu/jolt/v7i3/article2.html> (listing state computer trespass laws).

253. The division has a web page. See United States Department of Justice, *Computer Crime & Intellectual Property Section*, <http://www.usdoj.gov/criminal/cybercrime>.

254. See Michael Coblenz, *Intellectual Property Crimes*, 9 ALB. L.J. SCI. & TECH. 235, 242 (1999).

255. See Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003 (CAN-SPAM Act of 2003), Pub. L. No. 108-187, 117 Stat. 2699 (codified as amended in scattered sections of 15 U.S.C., 18 U.S.C., 28 U.S.C., and 47 U.S.C.); Lemley, *supra* note 4, at 541.

256. LAWRENCE LESSIG, *FREE CULTURE* 1-3 (2004).

257. 328 U.S. 256 (1946).

258. *Id.* at 260-61; LESSIG, *supra* note 256, at 1-3. In particular, Lessig explains that Justice Douglas, in *Causby*, 328 U.S. at 260-61, rewrote the maxim: “*cujus est solum, ejus est usque ad coelum et ad inferos*,” which means, “Whosoever owns the land, owns to the sky and to the bottom of the earth.” Thus, “[i]n a single sentence, hundreds of years of property law were erased,”

So in the *Causby* story, we have a new technology, the airplane, rewriting the law of trespass. What was formerly understood as trespassory is now, with the adoption of new technology, understood as non-trespassory.<sup>259</sup> Though Lessig does not note it, this story is the inverse, in many ways, of the arguments that are made for the creation of cyberproperty rights.

The proposition that code is simply this generation's socially disruptive technology *du jour* does not seem like much of a concession to demand from cyberlaw scholars. Indeed, it lends some promise that the enterprise of cyberlaw has roots in something deeper than the heady turmoil of the past ten years, which included a certain Internet stock bubble. If we see cyberlaw as an attempt to build an academic discourse around the way law responds to technological pressures and is shaped by technological change, we obtain a wealth of *Causby*-like precedents to draw upon.

In the context of cyberproperty, there is a particular danger in not seeing the connection between the interplay of law and code and the interplay of law and prior technologies. The equation of code with something "natural" was something that Lessig seemed intent on resisting in *Code*, for legitimate reasons.<sup>260</sup> His fear was that such an approach would lull the public into an unwise complacency about a *status quo*. But with regard to cyberproperty, "code is law" rhetoric, when combined with cyberspace rhetoric, may actually make us overzealous with attempts to "fix" what is perceived as technology run rampant over legal ordering.<sup>261</sup>

David McGowan and Richard Epstein have both endorsed language by the intermediate appellate court in *Hamidi* that suggested the denial of an injunction to Intel simply perpetuated "a wasteful cat and mouse game."<sup>262</sup> But if the law takes any given cat and mouse game seriously enough to intervene, it must ultimately choose between cats and mice—and the law is not always able to do this confidently. In such cases, we often leave new technologies alone, and the cats and mice are left to the survival of the fittest.

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divesting landowners of their property rights in favor of the public interest in air travel. *Id.* at 2. This point about airplanes has been a popular one. See Epstein, *Cybertrespass*, *supra* note 2, at 75 (explaining the economic sensibility of this divestiture); Levmore, *supra* note 188, at 192 (same). I rely on Epstein's translation of the maxim.

259. As Larry Solum has noted, Lessig's description of what happened in *Causby* is actually a bit off in some ways, but is correct enough where it matters. Lawrence B. Solum, *The Future of Copyright*, 83 TEX. L. REV. 1137, 1444 (2005) (reviewing LESSIG, *supra* note 256); see also This Is Very Funny (Nov. 9, 2005, 6:15 EST), <http://www.lessig.org/blog/archives/003202.shtml> (Lessig responding to claims that he misrepresented the import of the case in his book).

260. LESSIG, *supra* note 7, at 6 ("Code is never found; it is only ever made, and only ever made by us.").

261. *Id.*

262. Epstein, *Intel v. Hamidi*, *supra* note 2, at 151 (calling this "right on the money"); McGowan, *The Trespass Trouble*, *supra* note 2, at 123; cf. Wagner, *supra* note 2, at 497 (favoring the creation of a new cyberproperty right because the current state of affairs is "complex, uncertain, and unstable").

In any given cat and mouse game, the mouse possesses a technology of escape and the cat possesses a technology of capture. By failing to intervene in the affairs of cats and mice, the law is refusing to take sides in the game. If something is “wasted” by the law’s lack of intrusion, it is not clear who has the superior right to complain of this waste? Is it the cat or the mouse? Should the law step in to “fix” it by de-clawing cats? Should it force mice to lie down on dinner plates? Ronald Coase once explained that property claims always involve two parties who can structure their entitlements in various ways.<sup>263</sup> The problem for the law is not in seeing that there is a conflict, but in knowing where the optimal entitlement should lie or if it should lie at all.<sup>264</sup> Just because we can identify, in technologies of website exclusion, two “powers” that are at odds, that does not mean that this is a “problem” that the law is suited to fix.<sup>265</sup>

To their credit, *Hamidi* critics and cyberproperty proponents Patricia Bellia and Polk Wagner do not ultimately come down firmly on the side of either cats or mice—meaning, in this case, cyberproperty owners and putative “trespassers.”<sup>266</sup> They recognize that, in some instances, the law should favor the trespassers and send the cats away.<sup>267</sup> Bellia cautiously advocates for some “technology-displacing” laws.<sup>268</sup> Wagner puts this in a different way, calling for the consideration of “legal preemption,” which he explains is the “direct [legal] control of software-regulatory effects.”<sup>269</sup>

But from a doctrinal perspective, the arguments of Bellia and Wagner for *inversions* of the exclusionary rights associated with cyberproperty seem a bit strange. The very doctrinal premise of cyberproperty, as explained in Part I,

263. Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

264. See, e.g., Mark Kelman, *Taking Takings Seriously: An Essay for Centrists*, 74 CAL. L. REV. 1829, 1840-43 (1986) (reviewing RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* (1985)) (discussing the problematic implications of Coasian reasoning for traditional liberal theorists).

265. At the same time, it does not mean that the law should always stand idly by—the only point here is that the mere presence of a conflict over outcomes does not always amount to a justification for legal intervention. I am grateful to David McGowan and Mike Madison for pressing me on this point.

266. See Bellia, *supra* note 2, at 2273; Wagner, *supra* note 2, at 463.

267. Accord Gibson, *supra* note 215, at 171-72. Professor Gibson argues for “technological” responses to potential new laws protecting databases. Like Bellia and Wagner, Gibson is exploring the creation of technology-limiting rules as a means to address the usurpation of law by coded regulation. See *id.*

268. Bellia, *supra* note 2, at 2273. In fact, Bellia argues that the legal right to penetrate technological barriers is the “logical conclusion” of the “anti-enclosure” position regarding cyberproperty. *Id.* at 2194. In addition, Bella states that, “To achieve an appropriate balance among the competing interests at stake in cyberproperty claims, we should look to a rule that demands adequate notice of the conditions of access and backs those conditions with property-rule protection, but is limited where necessary by technology-displacing rules.” *Id.* at 2273.

269. Wagner, *supra* note 2, at 463. James Gibson might label these anti-cyberproperty “technological” proposals. See Gibson, *supra* note 215, at 167-70.

resembles an argument for a private property right under the doctrine of trespass to chattels. To turn that doctrine on its head is an interesting aspiration, but how, at least under that cyberproperty doctrines, might a court deny a website or server “owner” the right to block incoming emails or to prevent visitors from getting access to files on a server? What is the criterion? The openness of *Bellia* and *Wagner* to notions of “technology-displacing law” and “legal preemption” goes a long way toward making their positions palatable to those who favor open access regimes, but it makes *Bellia* and *Wagner*, to some degree, not cyberproperty advocates, but simply advocates for some regulatory involvement in online access rights.

Their entertainment of legal trespassing rights also places *Bellia* and *Wagner* at a considerable ideological distance away from the dissenting justices in the *Hamidi* case. Undoubtedly, a jurist agreeing with the dissenting opinion of Justice Brown would have a hard time justifying the prevention of cyberproperty “owners” from using exclusionary technologies to protect their putative cyberproperty assets. This would not be merely “licens[ing] a form of trespass,” but legally *mandating* it.<sup>270</sup>

Cyberproperty arguments are thus dependent upon two claims: the effectiveness of a freely exercised technological power *and* a faith in the normative correctness of the free exercise of that power. In other words, there is not just a sense of a wasteful cat and mouse game, but a conviction that the cats (the owners of digital computing equipment) should always win.

The analogy to a farmer’s fence, originally used by Lessig in passing, is worth returning to. We should see that what makes this argument seem cogent is that the (cyberspatial) fence is, in the reader’s mind, surrounding some (cyberspatial) farm. When we start with the notion that cyberspace is analogous to a land filled with private farms and farmers, a law granting the farmers an absolute right to exclude, either by fences or by law, does not seem very far beyond the pale. The notion of weighing legal and technological utility, appears, in that context, highly appropriate.

But stop a second and note: the appropriateness of cyberproperty in this analogy is not dependent upon our feelings about the fence (the code), but upon our intuition about the farm (the property). If a farmer’s fence were placed somewhere else in the analogy, such as in the middle of a four-lane highway, or floating in the ocean or in the surf on a beach, or even on someone else’s land—our confidence in the wisdom of providing legal alternative to the fence’s exclusionary powers would disappear.

A farmer’s fence is not a law, in other words, it is merely a technology. The technology of a fence can protect property, but it does not create a property right by itself. The power of a fence, like the power of code, is therefore importantly different than the power of law.

Code should not be confused with law. It is ironic that Lessig’s rhetoric, which aspired to avoid this conflation, has played a role in enabling it.

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270. *Intel Corp. v. Hamidi*, 71 P.3d 296, 316 (Cal. 2003) (Brown, J., dissenting) (citing *Rowan v. U.S. Post Office Dep’t*, 397 U.S. 728, 736-37 (1970)).

### C. *Cyberproperty's Statutory Cousins*

In the prior two parts of this Article, I questioned two of the assumptions that seem to drive arguments for cyberproperty: the belief that the code on networked computers is akin to traditional forms of property and the belief that code is exceptionally law-like. While these beliefs have animated the development of cyberproperty, they have also had influence on other areas of cyberlaw. The dangers of “code is law” and “code is property” are not limited to the issue of common law trespass to chattels. The confusion they represent permeates into other areas of law as well.

If one wishes to find statutory analogies to cybertrespass claims, the best statutory foil is the Computer Fraud and Abuse Act (“CFAA”).<sup>271</sup> But comparing the CFAA to cyberproperty raises complex issues of statutory interpretation.<sup>272</sup> The relationship between common law cyberproperty and statutory foils can perhaps be better illuminated by discussing a case related to another statutory cousin of cyberproperty: the “anti-circumvention” provisions of the Digital Millennium Copyright Act (“DMCA”).<sup>273</sup>

These provisions of the DMCA ban the distribution and use of digital tools in order to, among other things, “circumvent a technological measure that effectively controls access to a work protected under this title.”<sup>274</sup> Like the CFAA, the DMCA can be understood to legally reify a technology of exclusion, prohibiting the circumvention of measures that effectively control access. And (again like the CFAA) the history of the DMCA reflects a similar belief by legislators found with regard to judges in cyberproperty cases that computer code can create a type of digital “space” and a type of exclusionary privilege that makes analogies to trespass to real property justified.<sup>275</sup>

This is illustrated in the well-known DMCA case of *Universal City Studios, Inc. v. Corely*.<sup>276</sup> The case was initiated when several movie studios challenged the distribution of a decryption program, DeCSS, by “hackers” (as in *Thrifty-Tel*) who were using the algorithm to decrypt DVDs. The studios sought an

271. See Computer Fraud and Abuse Act, 18 U.S.C. § 1030 (2000); Hunter, *supra* note 4, at 483 (stating that trespass to chattels and computer trespass statutes are treated “interchangeably”); Wagner, *supra* note 2, at 498 (listing the CFAA and trespass law as two doctrines supporting the cyberproperty right). The legislative history of the CFAA, beginning in the early 1980s, abounds with the same rhetoric of virtual spatial invasion that is found in cases defending cyberproperty rights. Madison, *supra* note 4, at 478-85 (explaining the history and purpose of the CFAA).

272. Helpful discussions of the CFAA that touch on its relation to cyberproperty rights can be found in Bellia, *supra* note 2, at 2167; Hunter, *supra* note 4, at 475-83; Kerr, *supra* note 32, at 1616, 1633; Madison, *supra* note 4, at 478.

273. 17 U.S.C. § 1201 (2000); Burk, *supra* note 23, at 21.

274. *Id.* § 1201(a)(1)(A).

275. Madison, *supra* note 4, at 434-35.

276. 273 F.3d 429, 445 (2d Cir. 2001) (“Communication does not lose constitutional protection as ‘speech’ simply because it is expressed in the language of computer code.”).

injunction against the distribution of the code, alleging that it violated the provisions of the DMCA described above.<sup>277</sup> The defendants relied on prior decisions equating software with speech and argued that the First Amendment protected their distribution of the decryption code.<sup>278</sup>

The Second Circuit agreed that computer code could be classified as speech.<sup>279</sup> The panel still upheld the injunction, however, on the basis that First Amendment protections for speech in code would need to be less broad, because computer code “combin[es] nonspeech and speech elements, i.e., functional and expressive elements.”<sup>280</sup> In support of the variant First Amendment standard for code, the Second Circuit cited to a prior Supreme Court case about radio broadcasting for the proposition that differences inherent in “new media” justify divergent standards for First Amendment analysis, again suggesting that computer code was properly understood as a form of expressive media.<sup>281</sup>

The Second Circuit’s decision to uphold the injunction, however, made clear that it conceived of the law in this case as protecting a kind of cyberproperty right of exclusion that the DMCA had brought into being.<sup>282</sup> In explaining the need for a prohibition against the dissemination of the code, the Second Circuit stated:

[W]e must recognize that the essential purpose of encryption code is to prevent unauthorized access. *Owners of all property rights* are entitled to *prohibit access to their property* by unauthorized persons. Homeowners can install locks on the doors of their houses. Custodians of valuables can place them in safes. Stores can attach to products security devices that will activate alarms if the products are taken away without purchase. These and similar security devices can be circumvented. Burglars can use skeleton keys to open door locks. Thieves can obtain the combinations to safes. . . . *CSS is like a lock on a homeowner’s door*, a combination of a safe, or a security device attached to a store’s products.

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277. *Id.*

278. *Id.*

279. *Id.* at 449 n.25 (explaining that code is unlike other forms of technology because “it uses a notational system comprehensible by humans” and therefore “qualifies as speech”).

280. *Id.* at 451. The Second Circuit was responding to the fact that First Amendment doctrine requires courts to separate what is legally expressive “speech” from that which must be defined as non-expressive “conduct.” As Wagner has stated, “The crux of the speech-conduct distinction is that while ‘speech’ is highly protected, ‘conduct’ is not.” R. Polk Wagner, *The Medium is the Mistake: The Law of Software for the First Amendment*, 51 STAN. L. REV. 387, 393 (1999).

281. *Corley*, 273 F.3d at 451 (citing *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 386 (1969)). What is interesting here is that code is framed as a new form of “media.” *Id.* Media-specific First Amendment analysis, in the abstract, would appear to be in keeping with past doctrine. See Wagner, *supra* note 280, at 396-98.

282. *Corley*, 273 F.3d at 452-53.

DeCSS is computer code that can decrypt CSS. In its basic function, it is like a skeleton key that can open a locked door, a combination that can open a safe, or a device that can neutralize the security device attached to a store's products.<sup>283</sup>

So, according to the Second Circuit in *Corely*, the DMCA could be analogized to a statute making a disc a "home" that a CSS-like "security device" protects, or a "box" which a CSS-like "lock" holds shut.<sup>284</sup>

The *Corely* court actually makes real Lessig's "code is law" equation in a way Lessig has recognized and lamented. The equation is more true, post-*Corely*, than it was when it was first postulated.<sup>285</sup> As noted above, Lessig had stated, in reference to earlier proceedings in the case, that "[y]ou can't easily rip the contents of my DVD because the code locks it tight. The code functions as a law might function: Telling the user what she can and cannot do."<sup>286</sup>

Lessig's analogy of the locked box, with the CSS as lock, is entirely consistent with the court's description. But in *Corely*, applying the DMCA, the Second Circuit stated that Congress had transformed this technological power of software into a form of legal power. The encryption of the DVD was merely a technological lock prohibiting certain actions on the part of the user. A legal right to exclude was legislatively fashioned from a mere technological power.

As explained above, it is hard to see clearly how this type of "code to law" transformation follows from any past understanding of the proper relation of law and technology. Locks, fences, and other digital barriers may be instrumental in creating legal consequences in some cases, but generally they are simply private technologies used for private purposes, not to create new forms of exclusive property. In *Corely*, the Second Circuit read the DMCA as a law prohibiting the interference with the intended results of private software structures, effectively transforming code into law.<sup>287</sup> Thus, "code is law" becomes a truer statement than it once was.

Further, it is clear from *Corley* that the transformation of code to law was accompanied by a willingness to envision digital code as creating a protected

283. *Id.* (emphasis added).

284. *See id.* This conception, although perhaps a bit perplexing, was not by any means a creation of judicial fancy. This was exactly what Congress thought it was doing in enacting the Digital Millennium Copyright Act provisions at issue in *Corely*—giving content owners the power to digitally lock and seal their digitally encoded intellectual property. *See* Madison, *supra* note 4, at 473 (noting how the U.S. Senate Report accompanying the final bill analogized the prohibited conduct to breaking and entering homes).

285. LESSIG, *supra* note 256, at xviii (stating that "code is law" is now more true than it was in the past); Gibson, *supra* note 215, at 199-202, 220 (describing the DMCA and CFAA as examples of "technological" statutes that intermix powers of law and software); Lessig, *Law Regulating Code*, *supra* note 216, at 7 ("The DMCA thus not only fails to balance the imbalance caused by changes in code; the DMCA plainly exacerbates it.").

286. *See* Lessig, *supra* note 211, at 990.

287. *Corley*, 273 F.3d at 458-59.

form of virtual space.<sup>288</sup> The court explains that the plaintiff's actions are fairly analogized to a home or store owner making technological attempts to keep burglars and intruders out of her private space.<sup>289</sup> The court's analogies to doors, locks, and unlawful intruders have little legal relevance unless one accepts that the owner of code (seen as someone other than the owner of the DVD) has the same legal right to prohibit "access" as is enjoyed by an owner of real property.

The court's spatial rhetorics in *Corely* serve the same rhetorical purpose they serve in the context of cyberproperty doctrine—it is through an analogy to private property rights that an injunction is issued against an activity that is legally understood as a form of speech. The justification hinges on the trope of code as property, equating the power of DeCSS to decrypt with an invasion into real property.<sup>290</sup>

I mention the DMCA and the *Corely* case briefly here because I think the decision illuminates two important points. First, the issues of cyberproperty, while they may have originally derived primarily from the law of trespass to chattels, are emergent in other areas of law, particularly in new statutes designed to protect new forms of digital "property" rights.<sup>291</sup> Second, it seems no coincidence that both the *Corely* and the *Hamidi* courts wrestled with the conflict between claims of free speech and private property.<sup>292</sup> Digital networks are communicative networks and computers are symbolic, information-processing machines. The agenda of cyberproperty is, in large part, to take what might be seen as a form of speech and turn it into the stuff of private property. If the law continues down this path, the conflict between claims of free speech and claims of private property rights will likely only intensify as cyberproperty impulses give rise to new statutory enactments and extensions of common law doctrines.

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288. *Id.* at 458.

289. *Id.* at 452-53.

290. See Madison, *supra* note 4, at 471-78 (discussing *Corely* and the DMCA). And yet if one thinks about what is really happening in the case, the spatial rhetorics employed by the court seem deeply unstable. With an encrypted DVD, there is no inner sanctum where a private owner or private property resides. Rather, the full code constituting the movie is always perfectly and fully accessible on the disc. Encryption is a type of technology that hides visible things in plain sight. For instance, take this string of letters: B A K C E R A C L. In these letters I have "locked" information through a program of encryption. However, my lock is simple to break by using the following decryption program: the reader should proceed from first letter, to the last, and work back and forth inward. Freeing the coded object of "Blackacre" from the "safe" of my encryption using my "tool" of instruction is essentially what was happening, on a technological level, with the decryption program DeCSS. Does the mere intermediation of computing technology create a "space" that did not exist in my example?

291. Gibson, *supra* note 215, at 240 (noting trends toward the expansion of such "technological" rights).

292. Wagner, *supra* note 2, at 513 ("Private entitlements often raise troublesome questions about their relationship to public interests in free expression; as a general matter, society deals with such questions by broadly allowing private rights holders to enforce their rights under neutral laws without raising First Amendment objections.").

### CONCLUSION

There is a danger created, as Judge Easterbrook put it, when lawyers attempt to be blind trailblazers.<sup>293</sup> We have no reason to trust that creating broad legal rights of exclusion online will lead us to better social outcomes and good reason to believe that cyberproperty rights might well, under the cover of private property, lead to significant harms.

The majority of the California Supreme Court in *Hamidi* got the issue of cyberproperty right by simply recognizing the need for caution in the evolution of the common law.<sup>294</sup> As Richard Epstein once said: “In law, as in medicine, we should still remember that the basic principle is, *primum, non nocere*: first do no harm.”<sup>295</sup>

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293. Easterbrook, *supra* note 152, at 207.

294. *Intel Corp. v. Hamidi*, 71 P.3d 296, 312 (Cal. 2003).

295. Epstein, *Intellectual Property*, *supra* note 128, at 827.

