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MAPPING LEGAL METAPHORS IN CYBERSPACE: EVOLVING THE UNDERLYING PARADIGM

by ROBERT REILLY†

I. INTRODUCTION

The new media's impact on law's specialized information places, on legal processes and methods that involve the movement of information over distances, on legal doctrines and concepts that require information to be contained in some manner, and even on the boundaries of how law is categorized, still seem to me to be likely, over time, *to be profound* . . . [given the] new ways of managing relationships, with new ways of resolving conflicts, with new ways of ordering behavior, and with new ways of storing and sharing information.¹

For more than 200 years we have linked legal precedents to actions. This "metaphor² mapping" has stretched across a large number of societal and technological changes. It appears that the Web³ has stretched some of those concepts to the breaking point. If so, then the law cannot expect to support the same symbols and metaphors.⁴ Thus, an attempt to map metaphors onto territory that is as unstable, unknown, and changeable as cyberspace proves to be difficult. It is also problematic to attempt to apply a metaphor onto a medium such as the Web where there are so many relationships that overlap.

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1. M. Ethan Katsh, *Cybertime, Cyberspace, and Cyberlaw*, 1995 J. ONLINE L. 1, ¶ 11 (June, 1995) <<http://warthog.cc.wm.edu/law/publications/jol/katsh.html>>.

2. See GEORGE LAKOFF & MARK JOHNSON, *METAPHORS WE LIVE BY* 3 (1980) ("The concepts that govern our thoughts are not just matters of intellect. They also govern our everyday functioning, down to the most mundane details. Our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities. If we are right in suggesting that our conceptual system is largely metaphorical, then the way we think, what we experience, and what we do everyday is very much a matter of metaphor.")

3. "Web" is taken herein to be synonymous with the terms: cyberspace, the Internet, the Net, the World Wide Web, or WWW.

4. See *generally* MILNER S. BALL, *LYING DOWN TOGETHER: LAW, METAPHOR AND THEOLOGY* 21-36 (1985).

Adding to the problem is the fact that the current process of selecting metaphors tends to focus on the *mechanical* similarities of the different media (e.g., how is a given action like an action if a print metaphor, or a telephony metaphor were employed). Given the current state of evolution in which a vast "community" is developing⁵ and the demographics of the Web are changing.⁶ It may be more productive to view the Web as an *organic* entity (e.g., cyberspace is like: a community, a global brain, a town common). However, shifting metaphors may be a difficult task, especially when the environment is so abstract.

It is generally simpler . . . for people to consider the impact of a ten percent rise in gasoline prices than it is for them to consider the impact of a tenfold increase in the capacity of computer memory chips. Material changes are often concrete and imaginable; information changes seem very abstract and mystical.⁷

"The shift from print to electronic information technologies provides the law with a new environment, one that is less fixed, less structured, less stable and, consequently, more versatile and volatile."⁸

An organic model would cause those who map metaphors to shift their paradigm so as to view cyberspace as a place where a society of people exist—a community is developing, and not as a piece of machinery—a mere technological artifact. An appropriate organic model may be one in which cyberspace is viewed in the same manner the *town commons* of 200 years were viewed—a commonly shared community resource.

II. THE STATE OF THE ART—GETTING CUT ON THE EDGE

The real question is not whether machines *think* but whether men do. The mystery which surrounds a thinking machine already surrounds a thinking man.⁹ Attempting to define which metaphor the various new technologies fall into is not a new or unique legal activity. For example,

5. See BRUCE STERLING, *THE HACKER CRACKDOWN* 247 (1995).

6. The Internet is becoming more demographically similar to society in general. See, e.g., *Gvu's WWW User Surveys* (last modified Jan. 12, 1998) <http://www.gvu.gatech.edu/user_surveys/survey-1997-10/>. Anthony Rutkowski, Executive Director of the Internet Society, states that "a commonly used method of estimating the total number of Internet users is to multiply the number of host computers by 10. For example, in 1993, [there were] about 20 million users." *Id.* See also Robert Reilly, *TRANSFORMING THE PARADIGM FOR CRAFTING ACCEPTABLE USE POLICY: MANAGING THE ELECTRONIC COMMONS* 5-8 (1997). See also John S. Quarterman, *Internet Communications Services on NSFNET*, *MATRIX NEWS*, Mar. 3, 1995.

7. JOSHUA MEYROWITZ, *NO SENSE OF PLACE: THE IMPACT OF ELECTRONIC MEDIA ON SOCIAL BEHAVIOR* 20 (1985).

8. M. Ethan Katsh, *Law in a Digital World*, 38 *VILL L. REV.* 403, 406 (1993).

9. B.F. SKINNER, *CONTINGENCIES OF REINFORCEMENT: A THEORETICAL ANALYSIS* (1969).

the United States District Court for the Eastern District of Pennsylvania granted a preliminary injunction blocking enforcement of the Communications Decency Act ("CDA").¹⁰ The Supreme Court unanimously upheld this pronouncement.¹¹ "One key issue was whether [on-line] media should be regulated with free speech in mind, as print media are regulated, or should be regulated with community moral values in mind as are broadcast media."¹² The need for resolution of this issue points out the lack of clarity as to which legal metaphor(s) applies in cyberspace.

Law is a process that is oriented around working with information. As new modes of working with information emerge, the law cannot be expected to function or to be viewed in the same manner as it was in an era in which print was the primary communications medium. Nor can the law expect to support the same symbols and metaphors.¹³

Historically, the Supreme Court does not have a particularly strong record when dealing with Constitutional issues as they relate to new technologies. In 1915, the Court stated that motion pictures "[are] not to be regarded . . . as part of the press of the country."¹⁴ However, in 1948 the Court stated that "moving pictures . . . are included in the press whose freedom is guaranteed by the First Amendment."¹⁵

"It was such myopia that caused early films to be labeled as 'moving pictures,' rather than to be recognized as a new art form."¹⁶ In the early days of printing, this line of thought caused the "printing metaphor" to be embraced by "many powerful institutions."¹⁷ Printing was assumed to merely be a technological replacement for writing. "These institutions failed to understand however, that printing could not be controlled as easily as writing had been and they did not recognize that printing also

10. See *ACLU v. Reno*, 929 F. Supp. 824, 883 (E.D. Pa. 1996).

11. See *Reno v. ACLU*, 117 S. Ct. 2329, 2351 (1997).

12. Howard Rheingold, *The Tragedy of the Electronic Commons* (visited Feb. 13, 1998) <<http://www.well.com/user/hlr/tomorrow/tomorrowcommons.html>>.

13. See BALL, *supra* note 4, at 21-36. The author suggests that current metaphors of law as bulwark of freedom promote "order" rather than "justice" and that the new conceptual metaphor is needed to open the dam and allow circulation, connection and progress. Persuasion is also a key function of the metaphor.

Many metaphors have been offered in attempts to capture the nature and meaning of an on-line computer network. An on-line computer network is analogous to many familiar real-life metaphors, *not just to one*. It is analogous to a: newspaper, republisher/disseminator, common carrier (e.g., telephone company), traditional bulletin board (the wood and cork type), broadcaster, desk at the office, desk at home in the den, free and open frontier, safe deposit box in a bank, hotel/motel room which one has rented, fraternity/sorority house. Depending on which metaphor is invoked, the legal perspective of a computer account will vary greatly.

14. *Mutual Film Corp. v. Industrial Comm'n*, 236 U.S. 230, 244 (1915).

15. *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 166 (1948).

16. Katsh, *supra* note 8, at 407.

17. *Id.*

changed the larger environment."¹⁸

In *Olmstead v. United States*,¹⁹ an FBI wiretap was used to obtain evidence of approximately seventy people who were engaged in a conspiracy to transport and sell liquors in violation of the Eighteenth Amendment (National Prohibition Act of 1919).²⁰ The Court found that the wiretaps were made without having to physically trespass on private property because the phone wires were not part of Olmstead's house or office. The Court ruled that the Fourth Amendment had not been violated as there had been no physical invasion.

However, by 1967 the Court viewed physical invasion differently as shown in *Katz v. United States*.²¹ The defendant Katz was convicted in the United States District Court for the Southern District of California for violating a statute proscribing interstate transmission of wire communication of bets or wagers, and he appealed. The Court of Appeals affirmed,²² and *certiorari* was granted. The Supreme Court held that the government's activities of electronically listening to and recording defendant Katz's words spoken into a telephone receiver in a public telephone booth violated the privacy upon which the defendant justifiably relied while using the telephone booth.²³ Thus, this action constituted a search and seizure within the Fourth Amendment, and the fact that an electronic device employed to achieve that end did not happen to pene-

18. *Id.* at 408. See also ELIZABETH EISENSTEIN, *THE PRINTING PRESS AS AN AGENT OF CHANGE* 303-13 (1979). In her classic study of the impact of printing, Eisenstein noted that Church officials hailed printing as a "divine art" and as being "divinely inspired." *Id.* at 317. Yet as printing was employed in novel ways and as it became a mass medium, individuals became empowered and were able to challenge the Church in ways that had not been possible in earlier periods. The Reformation was "a movement that was shaped at the very outset (and in large part ushered in) by the new powers of the press." *Id.* at 303. Thus, in 1519, when Martin Luther tacked his complaints about the Catholic Church to the church door in Wittenberg, Germany, the Ninety Five Theses were also printed and circulated widely. See *id.* at 306. Eisenstein wrote:

When Luther proposed debate over his Ninety Five Theses, his action was not in and of itself revolutionary. It was entirely conventional for professors of theology to hold disputations over an issue such as indulgences and 'church doors were the customary place for medieval publicity.' But these particular theses did not stay tacked to the church door (if indeed they were ever really placed there). To a sixteenth century Lutheran chronicler, 'it almost appeared as if the angels themselves has been their messengers and brought them before the eyes of all the people.' Luther himself expressed puzzlement, when addressing Pope Leo X six months after the initial event: It is a mystery to me how my theses, more so than my other writings, indeed those of other professors, were spread to so many places. They were meant exclusively for our academic circle here.

Id.

19. *Olmstead v. United States*, 277 U.S. 438 (1928).

20. *Id.* at 456-57.

21. *Katz v. United States*, 389 U.S. 347 (1967).

22. See *Katz v. United States*, 369 F.2d 130, 136 (9th Cir. 1966).

23. See *Katz*, 389 U.S. at 347.

trate the wall of the booth could have no constitutional significance. Furthermore, the Court held that the search and seizure, without prior judicial sanction and attendant safeguards, did not comply with Constitutional standards.²⁴ Although, accepting the account of the government's actions as accurate, the magistrate could constitutionally have authorized, with appropriate safeguards, a very limited search and seizure. The Court essentially rejected the *Olmstead* notion that there needed to be a "physical intrusion . . . [or] trespass."²⁵

Recently, the Court appears to be repeating the past²⁶ when in *Turner Broadcasting System, Inc. v. FCC*²⁷ the Court stated that the *Red Lion*²⁸ standard does *not* apply to cable television (even though it applies to other media).²⁹ The "Court often succumb[s] to the temptation to analogize new electronic media to existing technologies for which they have already [constitutional] models to rely upon."³⁰ For example, in *Los Angeles v. Preferred Communications*,³¹ Justice Blackmun stated that: "[i]n assessing [constitutional] claims concerning cable access, the Court must determine whether the characteristics of cable television make it sufficiently analogous to another medium to warrant application of an already existing standard, or whether those characteristics require new analysis."³² In the vein of promoting a "new analysis,"³³ Justice Thomas has taken issue with the action of the Court in its uneven application of the law to changing technology.³⁴ He contends that:

[f]or many years, we have failed to articulate how and to what extent the First Amendment protects cable operators, programmers, and viewers from state and federal regulation. I think it is time we did so, and I cannot go along with the plurality's assiduous attempts to avoid ad-

24. *See id.*

25. *Id.*

26. Compare *Mutual Film Corp. v. Industrial Comm'n*, 236 U.S. 230 (1915) with *United States v. Paramount Pictures, Inc.*, 334 U.S. 131 (1948); Also compare *Olmstead v. United States*, 277 U.S. 438 (1928) with *Katz v. United States*, 389 U.S. 347 (1967).

27. *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622 (1994).

28. *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367 (1969). *See also* *Leathers v. Medlock*, 499 U.S. 439 (1991).

29. *See Turner*, 512 U.S. at 635. "[T]he rationale for applying a less rigorous standard of First Amendment scrutiny to broadcast regulation . . . does not apply in the context of cable regulation." *Id.* at 639. "[A]pplication of the more relaxed standard of scrutiny adopted in *Red Lion* and the other broadcast cases is inapt when determining the First Amendment validity of cable regulation." *Id.*

30. Note, *The Message in the Medium: The First Amendment on the Information Superhighway*, 107 HARV. L. REV. 1062 (1994).

31. *Los Angeles v. Preferred Communications, Inc.*, 476 U.S. 488 (1986).

32. *Id.* at 496.

33. *Id.*

34. *Denver Area Educ. Telecomm. Consortium, Inc. v. FCC*, 116 S. Ct. 2374, 2418 (1996) (Thomas, J., the Chief Justice, and Scalia, J., dissenting in part, concurring in part).

dressing that issue openly.³⁵

Justice Thomas continues his argument by noting: “[t]he text of the First Amendment makes no distinction between print, broadcast, and cable media, but we have done so.”³⁶

In *Red Lion*,³⁷ the Court held that, in light of the scarcity of broadcasting frequencies, the Government may require a broadcast licensee to share their frequency with others and to conduct themselves as a proxy or fiduciary with obligations to present those views and voices which are representative of their community and which would otherwise, by necessity, be barred from the airwaves.³⁸

The Court also noted, “[w]e thus endowed the public with a right of access”³⁹ “to social, political, esthetic, moral, and other ideas and experiences.”⁴⁰ The public right leaves broadcasters with substantial, but not complete, First Amendment protection of their editorial discretion—a right that provides a large measure of journalistic freedom, but not as large as that exercised by a newspaper.⁴¹

Justice Thomas also notes that, in contrast, “we have not permitted that level of government interference in the context of the print media.”⁴² In the *Miami Herald v. Publ’g v. Tornillo*:⁴³

[w]e invalidated a Florida statute that required newspapers to allow, free of charge, a right of reply to political candidates whose personal or professional character the paper assailed. We rejected the claim that the statute was constitutional because it fostered speech rather than restricted it, as well as a related claim that the newspaper could permissibly be made to serve as a public forum.⁴⁴

The *Miami Herald* court also flatly rejected the argument that the newspaper’s alleged media monopoly could justify forcing the paper to speak in contravention of its own editorial discretion.⁴⁵

The lack of understanding as to the nature of computer technology also occurs at the state level. Judge Easterbrook, of the Seventh Circuit Court of Appeals notes “[e]rror in legislation is common, and never more

35. *Id.*

36. *Id.* at 2419.

37. *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367 (1969).

38. *Id.* at 389.

39. *Denver Area*, 116 S. Ct. at 2419 (Thomas J. dissenting).

40. *Red Lion*, 395 U.S. at 390.

41. *See, e.g., Columbia Broadcasting Sys., Inc. v. Democratic Nat’l Comm.*, 412 U.S. 94, 117-118 (1973).

42. *Denver Area*, 116 S. Ct. at 2419 (Thomas J. dissenting).

43. *Miami Herald Publ’g Co. v. Tornillo*, 418 U.S. 241 (1974).

44. *Id.* at 256, 258.

45. *See id.* at 256.

so than when technology is galloping forward."⁴⁶ In New York, for example, the state legislature considered the passage of telecommunications legislation which seems to ignore fundamental Constitutional issues.⁴⁷

To add to the blurring of the legal landscape, there are a number of gaps in existing statutes addressing technology itself.⁴⁸ For example, in *United States v. LaMacchia*,⁴⁹ "the question of whether the defendant had in fact committed any crime at all turned out to be a difficult [question] for authorities to answer."⁵⁰ LaMacchia's attorney stated: "The government attempts to assert control over this burgeoning thing called the Internet [from time to time] . . . spasmodically overreacts in order to set an example, to deter behavior the government doesn't like,"⁵¹ which then leads to misapplication of the law.

In the long run, adoption of information technologies will blur the boundaries between citizens and agency and between agency and court. Blurring of these boundaries may necessitate rethinking the definitions of some of the basic events that define the administrative process, public participation and judicial review.⁵² For example, "the balance between speakers' rights and listeners' privacy interests depend largely on how the courts conceptualize the forum in which the speech takes place."⁵³

In addition to the gaps being created by this new on-line electronic technology, a legal and ethical blurring occurs due to the lack of consensus among the various stakeholders as to what legal metaphors apply. For example, if the Information Superhighway is regarded as analogous

46. Frank H. Easterbrook, Paper presented at the University of Chicago Legal Forum's Symposium on the Law of Cyberspace (November 1995) (discussing cyberspace and the law of the horse).

47. Voters Telecommunications Watch, *VTW Bill Watch #37* (Feb. 18, 1996) <<http://www.vtw.org/archive/960218-234525.html>>. New York Internet, a business oriented Internet Service Provider in New York state, suggested that New York State Internet Bill (S210/A3967) was poorly drafted as it had major Constitutional flaws and conflicted with existing statutes. The major problems were: (1) inappropriate liability for Internet providers, (2) criminalization of speech that is currently legal in print, and, (3) no mention of the plethora of parental control tools.

48. See David R. Johnson & Kevin A. Marks, *Mapping Electronic Data Communications Onto Existing Legal Metaphors: Should We Let Our Conscience (And Our Contracts) Be Our Guide?*, 38 VILL. L. REV. 487, 488 (1993).

49. *United States v. LaMacchia*, 871 F. Supp. 535 (D. Mass. 1994).

50. Mike Godwin, *No Copycat Criminal: LaMacchia Case Reveals a Federal Attitude Problem*, (Mar. 1995) <<http://www.swissnet.ai.mit.edu/6805/articles/dml/godwin-internet-world-march95.html>>.

51. See Harvey A. Silverglate, *Statement of Silverglate and Good Concerning the Dismissal of the Indictment in U.S. v. David M. LaMacchia* (Feb. 11, 1998) <<http://www.poto.net/dldf/dl-pr-dec-29.text>>.

52. See Henry A. Perritt, Jr., *The Electronic Agency and the Traditional Paradigms of Administrative Law*, 44 ADMIN. L. REV. 79, 80 (1992).

53. Note, *The Message in the Medium: The First Amendment on the Information Superhighway*, 107 HARV. L. REV. 1062, 1093 (1994).

to a public space, then First Amendment principles, evident outside of the electronic media, suggest the burden may be on users of the Information Superhighway to avoid unwanted (and otherwise legal) messages by averting their eyes. If, however, the Information Superhighway is regarded as analogous to a private phone conversation, then unwanted messages could be seen as "nuisance calls" and thus potentially actionable.

Too often the process of analogizing has focused on the technological or utilitarian similarities of the different media.⁵⁴ "Technological characteristics, however, should not be the crucial factor in determining the protection [technology usage] receives under the [U.S. Constitution]."⁵⁵ We "should ground [our] analysis in essential [constitutional] interests and draw upon salient technological characteristics only as the factual background against which the real [constitutional] concerns must be applied . . . [and the] Constitution's norms, at their deepest level, must be invariant under merely technological transformations."⁵⁶ This position, while supporting a new analysis, substantially advocates a one-faceted approach to the crafting of statutes and public policy. There may be more to the question than simply investigating the basic constitutional issues and ignoring the technological possibilities. There may be logistical and substantive as well as cultural and social differences in the nature of a new technological media that would provide compelling reasons to necessitate different standards for a given constitutionally protected act.⁵⁷ If these differences do exist, they must be understood at their deepest level, not merely analogized to some existing situation or artifact.

As new modes of understanding the nature of information emerges, one needs a guide to maneuver through the difficult areas. The best procedure to determine the rights and duties of the participants in electronic networking communities is not to select a particular metaphor, but rather, to apply basic principles of fairness and justice. In the case of cyberspace, this means evolving the underlying paradigm to reflect its developing organic nature.

54. See *supra* note 32.

55. Note, *supra* note 53, at 1066.

56. Laurence H. Tribe, *Address at the First Conference on Computers, Freedom and Privacy Boston, Mass.* (last modified July 1, 1997) <<http://www.swissnet.ai.mit.edu/6095/articles/tribe-constitution.txt>>.

57. *Los Angeles v. Preferred Communications, Inc.*, 476 U.S. 488, 496 (1986) (Blackmun, J., concurring) ("In assessing [constitutional] claims concerning cable access, the Court must determine whether the characteristics of cable television make it sufficiently analogous to another medium to warrant application of an already existing standard, or whether those characteristics require new analysis.").

III. EVOLVING THE NATURE OF A METAPHOR: MECHANICAL TOWARDS ORGANIC

Since the inception of networked data communications systems, commentators attempted to analyze the rights and duties of participants in these systems by mapping the systems against existing relationships in order to try to pick the "right" metaphor. These attempts, however, presuppose that there is some "best fit," some metaphor that will accurately characterize all the activities involved in these systems.⁵⁸

Milner S. Ball suggests the metaphors of law promote *order* rather than *justice*.⁵⁹ "As the predominant form of communication shifts from print to electronic, away from printed volumes of statutes, regulations and court opinions and even further away from carvings on stone, legal metaphors will also change to reflect the changes in communication."⁶⁰ It is far from certain that any mechanical metaphor (e.g., superhighway, printing press, telephone) is solely appropriate to cyberspace. Perhaps advocating for a new analysis is more accurate. A new analysis will necessitate a rethinking of the underlying mechanical-based metaphor(s) which define cyberspace toward inclusion of organic-based metaphors.

Fredrick Schauer observed "[l]egal rules and principles commonly contain not only normative determinations about what *ought* or *ought not* happen under certain circumstances, but also background factual assumptions about the nature of the world."⁶¹ "As the form of information changes from something tangible to something electronic, changes will occur in legal institutions and processes that have been oriented around particular physical spaces, and in legal concepts and doctrines that have depended upon a relationship with a particular space."⁶²

The new technologies, as the term cyberspace implies, allow those who work with information to overcome existing spatial boundaries and barriers to communication. Cyberspace does not mean that all territorial, institutional, doctrinal, or conceptual boundaries are replaced and become irrelevant, but cyberspace does overlay a whole new set of oppor-

58. See Johnson & Marks, *supra* note 48, at 487.

59. See BALL, *supra* note 4. Ball has pointed out that current legal metaphors may be based on earlier forms of communications. He suggests:

The conceptual system of law as the rampart of civilization is at least partially reinforced by a metonymy, the identification of or reference to law by the early means of its recordation and communication: the two tablets of stone which Moses bore to the Israelites, for example, or the stele, an eight-foot diorite shaft, on which the Code of Hammurabi was inscribed. The jurisprudence of the past has attributes of a quarry.

Id. at 23, n.12.

60. *Id.* at 112.

61. Fredrick Schauer, *Free Speech and the Demise of the Soapbox*, 84 COLUM. L. REV. 558, 558 (1984) (reviewing Ithiel de Sola Pool, *TECHNOLOGIES AND FREEDOM* (1985)).

62. Katsh, *supra* note 1, ¶ 6.

tunities for overcoming physical distances and creating and shaping virtual spaces. It is for this reason, and because new levels of informational interactions emerge that may not have existed before, that legal questions touching on the use of space, such as jurisdiction, become more complicated. More fundamentally, legal arrangements that assume something about the use and communication of information over space, such as the regulation or definition of the legal profession or a contract between several parties in different places, become vulnerable.⁶³

For example, encryption as a technology has confounded law enforcement's ability to conduct searches as it has traditionally done. Attorney General Janet Reno has noted that:

Encryption can frustrate completely our ability to lawfully search and seize evidence and to conduct electronic surveillance, two of the most effective tools that the law and the people of this country have given to law enforcement to do its work [T]oday we can, with a court order secured under a careful procedure to protect the privacy of innocent people, wiretap a communication. But if the communication is encrypted, the court order has no value. Therefore, our goal must be to encourage strong encryption for privacy in commerce [while] preserving law enforcement's ability to protect public safety and national security.⁶⁴

Furthermore, if one's right to privacy in cyberspace is to be endowed with protections equal to one's real-world right to privacy, it should be understood that, *inter alia*, in cyberspace, privacy is in the conceptual phase of development than it is a well defined statute.⁶⁵

63. *See id.* ¶ 25.

64. Janet Reno, An address presented to the Commonwealth Club of California, San Francisco, Cal., *Law Enforcement and Cyberspace* (June 14, 1996).

65. For cyberspace, the privacy tort seems to be ill defined. The three of the four torts (appropriation of another's name, unreasonable publicity to a private person, and false light) seem to be blind to the fact that the tort might occur on-line. In real life, a tort for 'intrusion upon seclusion' seems to generally be prosecuted through another statute (e.g., trespass, breaking and entering). Here the concept of invasion of privacy is defined by other statutes which encompass a physical intrusion of some sort.

Dean Prosser classified the privacy tort into ". . . four separate causes of action," or forms of invasion of privacy. William L. Prosser, *Privacy*, 48 CAL. L. REV. 383 (1960). As a result of Prosser's article, and, as a result of his being the drafter of the *Restatement (Second) of Torts*, these classifications have been recognized in a large number of court decisions.

These categories of invasion have been described as "distinct wrongs," *Phillips v. Smalley Maintenance Serv.*, 435 So. 2d 705 (Ala. 1983); and as, "loosely related but distinct [causes of action]." *Sun v. Langston*, 316 S.E.2d 172 (Ga. Ct. App. 1984)). They are: an unreasonable intrusion upon seclusion, *see id.*; appropriation of a person's name and/or likeness for commercial use/benefit, *see, e.g., McCall v. Courier-Journal*, 623 S.W.2d 882 (Ky. 1981); *Struner v. Dispatch Printing*, 442 N.E.2d 129 (Ohio Ct. App. 1982); *Covington v. Houston Post*, 743 S.W.2d 345 (Tex. Ct. App. 1988); RESTATEMENT (SECOND) OF TORTS, §§ 68, 625A(2)(b) (1977); unreasonable publicity given to a person's private life, *see, e.g.,*

Given the nature of cyberspace, common real-world logistical barriers are significantly altered, and those changes must be accommodated. We must merge and adapt our understanding of real life with the ever-evolving realities of the Web.

As the electronic culture matures, our language will eventually respond to the proliferation of informational contexts by providing us with more specialized and appropriate terms. Our language will then reflect the new kinds of informational spaces and imprecise or inaccurate metaphors will no longer have the same kind of influence on our thinking and perception that they have had for the last twenty years. As print related terms are used less often, the lens through which we view electronic space will put the novel qualities of cyberspace into clear focus. Assumptions that have been made as to who should control or organize cyberspace will be reassured.⁶⁶

Perhaps the time has come to revise our thinking in regard to many of the technologies that have developed in the past years and restructure the underlying legal perspective attached to them. This will cause new metaphors to evolve which view cyberspace as less of a mechanical entity and more of an organic entity.

IV. A NEW PARADIGM: MANAGING THE ELECTRONIC COMMONS

Only *the Law* resists and resents the notion that it should ever change its antiquated ways to meet the challenge of a changing world.⁶⁷

The notion of cyberspace as a 'commonly shared resource' is a powerful model upon which to perform a new analysis. This shift from a mechanical-based model to one that asserts that an organic-based model be part of its nature is a significant one. "[S]ince the barrier between the natural and computer sciences is often high and opaque . . ." ⁶⁸ it is necessary to provide some background in regard to the concept of managing a commonly shared resource. One position that appears to be quite powerful is that of biologist Garrett Hardin⁶⁹ who:

[i]n 1968 . . . brought to science's attention a little-known work by the nineteenth century amateur mathematician William Forster Lloyd on

McCall, 623 S.W.2d 882; *Struner*, 442 N.E.2d 129; *Covington*, 743 S.W.2d 345; RESTATEMENT (SECOND) OF TORTS, §§ 68, 625A(2)(b); and, placing a person in a false light before the public, *see, e.g.*, *Cantrell v. Forest City Pub.*, 419 U.S. 245 (1974); *Hogin v. Cottingham*, 533 So. 2d 525 (Ala. 1988); *Goodrich v. Waterbury Republican-Am., Inc.*, 448 A.2d 1317 (Conn. 1982); RESTATEMENT (SECOND) OF TORTS, §§ 120, 625A(2)(d).

66. *See* Katsh, *supra* note 8, at 470.

67. FRED RODELL, *WOE UNTO YOU, LAWYERS!* 23 (1939).

68. Roy M. Turner, *The Tragedy of the Commons and Distributed AI Systems* (visited July 1, 1997) <<http://cdps.umcs.maine.edu/Papers/1993/TofCommons/TR.html>>.

69. *See* Garret Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968).

population growth and control. Lloyd examined the fate of a *common* pasture shared among rational, utility-maximizing herdsmen.⁷⁰

Shepherds grazed their herds on the individual parcels of land they owned. But there was another pasture, a large public stretch of land held in reserve, owned in common by the villagers and known, logically enough, as the common. Then, some shepherds became greedy.

They began guiding their sheep to the common each day, preferring to wear out the public pasture because they thought it cost them nothing and saved their own small patches. Soon, others joined in, unwilling to deplete their lands. It wasn't long before the common was turned into a muddy wasteland—useless to anyone. As the shepherds watched their individual pastures fall to overgrazing, they realized that their village had been sacked by its own people. They had stolen their shared livelihood, economic security, cultural center, and much of their village's beauty from themselves and their children.⁷¹

The inexorable working out of the resource's ruin is Garrett Hardin's *The Tragedy of the Commons* (or perhaps more aptly identified as "The Tragedy of the Unmanaged Common"). In human affairs, the tragedy of the common has never been more evident than it is today. Its effects are pollution, global warming, ozone depletion, overfishing and extinction of species, abuse of aquifers, and destruction of the rain forests. "[These] problems are caused by a system of open access to commonly owned resources."⁷² At the heart of this is the free-rider or the overgrazer, and the issue of regulating use of a shared community resource—developing a community of people as opposed to (in the case of cyberspace) a community of printing presses, or, a conglomeration of superhighways.

Cyberspace is experiencing social dilemmas, which are common to humans interacting with each other.⁷³ But the existence of social dilemmas has not yet caused the focus of policy development or statute enactment for the Web to change from a mechanical-based model to a model which accounts for the organic-based nature of the Web. The academic community has been aware of the social dilemmas for a brief time. However, there has not been a wide ranging discussion of the issues and possible models to address these issues. Today the subject is just beginning

70. Turner, *supra* note 68.

71. Hardin, *supra* note 69.

72. Randy T. Simmons et. al., *The Tragedy of the Commons Revisited: Politics vs. Private Property* (visited Dec. 15, 1997) <<http://www.cei.org/essays/simmons1.html>>.

73. The growth of social issues on the Net is reflected in the dramatic growth of the existence of Mailing Lists and UseNet newsgroups that address such issues. A search of Altavista (altavista.digital.com) for the term "Intellectual Property" produced 68,637 hits and for "Privacy" produced 39,131 hits.

to be discussed⁷⁴ and to appear in the general press, but little has been written in regard to its impact on the Web.

The challenge confronting those who inhabit/manage cyberspace is how a group—a very large and demographically diverse group—can “organize and govern themselves to obtain collective benefits in situations where the temptations to free-ride and/or to break commitments are substantial.”⁷⁵ As Harold Innis (Marshall McLuhan’s colleague and mentor) has suggested, the introduction of a new medium of communications sets in motion deep-rooted change in important societal institutions by influencing their orientations to existing traditions.⁷⁶

In regard to managing cyberspace, Professor David Post indicates that “[i]ncreasing attention is currently paid to important and interesting questions about the rules that will, or should, govern behavior within the global networked environment.”⁷⁷ Post wonders what the governance mechanism will be like given such questions as:

What shape should copyright protection take in a world of instantaneous, cost less, and undetectable copying? Should the First Amendment be interpreted to encompass a right to post anonymous messages, or commercial messages, across Usenet groups, or a right to send encrypted messages that are, for all intents and purposes, immune to eavesdropping by law enforcement? What standard of liability should be imposed on system operators in regard to the availability of “obscene” material on their systems?⁷⁸ . . . Before we try to answer the substantive questions—before we try to decide what the ‘best’ copyright law for the global network might look like—we should pause to consider a necessarily antecedent question: what mechanisms exist whereby such a law could be implemented? Who can make and enforce the rules in cyberspace, whatever the substantive content of those rules might be?⁷⁹

In researching the models for behavioral control, Ellickson’s research identified a model that outlines five levels of “controllers” by which an individual’s behavior are governed. These “controllers” (as

74. See, e.g., Rheingold, *supra* note 12; Jay Hanson, *Tragedy of the Commons Re-stated* (visited Dec. 15, 1997) <<http://dieoff.org/page109.htm>>; Amy Friedlander, *The Fathering of an Ideology: The Persistent Malthusian Paradigm* (visited Dec. 15, 1997) <http://www.brown.edu/Courses/BioCommunity_Health168C/malthus.htm>; Graham Finnie, *Distance is No Object* (visited Dec. 15, 1997) <<http://www.teledot.com/0896/opinion/tdc0896worldview.html>>.

75. ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* 27 (1990).

76. See MARSHALL McLUHAN, *UNDERSTANDING MEDIA* 23 (1964).

77. David G. Post, *Anarchy, State, and the Internet: An Essay on Law-Making in Cyberspace*, 1995 J. ONLINE L. 3, ¶ 2 (visited Feb. 11, 1998) <<http://www.wm.edu/law/publications/jol/post.html>>.

78. *Id.*

79. *Id.* ¶4.

shown in Table 1) are: the actor him/herself, other individuals being acted upon, non-hierarchically organized social forces, hierarchically-organized non-governmental organizations, and, governments.⁸⁰

TABLE 1: FRAMEWORK FOR BEHAVIORAL CONTROLS⁸¹

LEVEL	CONTROLLER	SUBSTANTIVE RULES	SANCTION
1	The Actor him/herself	Personal Ethics	Self-Sanction
2	Second Party Controllers (e.g., the person acted upon)	Contractual provisions	Various self-help provisions
3	Non-hierarchically organized social forces	Social norms	Social sanctions
4	Hierarchically organized non- governmental organizations	Organizational rules	Organizational sanctions
5	Governments	Laws	State enforcement, coercive sanctions

To illustrate this framework, Post considers various rules that “combine to determine the frequency with which a particular behavior—say, the transmission of messages containing any of the FCC’s ‘seven dirty words’ might occur on my university’s local area network. Each network participant may have a personal ethical position in regard to the propriety or impropriety of such messages.”⁸²

One can imagine—not terribly realistically, perhaps, in this context—bilateral agreements between network users regarding the use of particular words in e-mail messages or in files stored on the network, or even resort to self-help (in the form of authorized or unauthorized file deletion) by individual network users. Each of these is, in turn, at least partially determined by each user’s response to various social forces such as cultural or professional norms. Formal or informal organization rules promulgated by the network administrators may apply to this conduct, as may federal or state laws regarding the transmission of “obscene” messages.⁸³

80. See ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 123-27 (1991).

81. *Id.* at 127-28 (citing Frank I. Michelman, *States’ Rights and States’ Roles: Permutations of ‘Sovereignty’ in National League of Cities v. Usery*, 86 YALE L.J. 1165, 1167 (1984)). The column labeled “Level” was added for the purpose of identification for this article.

82. Post, *supra* note 77, ¶ 9.

83. See *id.* ¶ 10.

The question becomes "whose rules will govern behavior in cyberspace?"⁸⁴ It is also important to understand "how . . . the competition among these controllers proceed? What are the 'controller-selecting rules' that determine which controller's rules take precedence in the event of conflict?"⁸⁵

Our federal government has employed Garrett Hardin's call for "mutual coercion, mutually agreed upon"⁸⁶ theory as the intellectual justification upon which to base nearly three decades of environmental legislation (Table 1, Level 5).⁸⁷ However,

[a]s that legislation developed, ideology and politics combined to select a narrow set of tools [for] managing the environment, primarily prohibition and command-and-control regulations. But these policy tools do not address underlying causes of . . . [the] problems, ignore some fundamental lessons of the Tragedy of the Commons [as described by Hardin] and place impossible demands on the political process.⁸⁸

While Hardin's thesis turns our thought process in the direction of viewing cyberspace as a shared community resource—an organic entity—Professor David Post notes that a state's ability "to impose sanctions on law-violators is fundamentally constrained by the need for physical proximity and physical control."⁸⁹ Post also observes that the sanctions will "vary in their ability to enforce whatever rules they choose to adopt, depending on the existence of conflicting higher-level controllers, and on the possibility that those who are subject to the rules can change jurisdictions to seek a more favorable rule set."⁹⁰

84. *Id.* ¶ 11.

85. *Id.*

To take a concrete example, how would the [now defunct] Communications Decency Act [have affected] the frequency with which 'indecent' or 'obscene' communications appear in any particular network community if the proscriptions in that Act conflicted with other behavioral 'controllers' within that community? And most specifically, what are the special characteristics of electronic networks that might influence the way in which these controller-selecting rules operate?

Id.

86. Hardin, *supra* note 69.

87. See Simmons et al., *supra* note 72.

88. *Id.*

89. Post, *supra* note 77, ¶ 34.

Such mechanisms, however, entail additional enforcement costs, both in terms of the direct costs of projecting sovereign power extra-territorially and the costs of coordinating and harmonizing the legal regimes of competing sovereigns. Thus, United States law is not ordinarily applicable to, nor can the United States ordinarily apply sanctions on, a network operator in, say, Singapore; attempts by the United States to go around these limitations require either some means of obtaining control over the network operator or its assets, or some measure of cooperation with State authorities in Singapore or other jurisdictions where the operator maintains physical assets on which judgments can be executed.

Id. ¶ 35.

90. *Id.* ¶ 1.

The notion that there must be state control of the Web should not be completely dismissed nor significantly diminished. Attempts by the federal government may not have been successful in managing the electronic commons as they may lack an understanding that there may be:

no principle more important for understanding rule-making in cyberspace than that of distinguishing between the Internet as a whole and the individual networks that are its component members; it is indeed the interplay between the vast number of largely centralized individual networks and the decentralized internetwork through which they can communicate that will prove to be of fundamental importance in determining the efficacy with which state law can be imposed on individual network communities.⁹¹

The Internet “proves relatively resistant to centralized control.”⁹² As far as state enforced statutes are concerned, Beryl Crowe notes that in “the past, those who no longer subscribed to the values of the dominant culture were held in check by the myth that the state possessed a monopoly on, [what Hardin refers to as] coercive force.”⁹³ However, this myth has undergone “continual erosion since the end of World War II owing to the success of the strategy of guerrilla warfare, as first revealed to the French in Indochina, and later conclusively demonstrated in Algeria.”⁹⁴ While the observations made by Hardin were correct, and his Tragedy of the Commons theory is powerful and an interesting metaphor upon which to redefine the nature of the Internet, its underlying assumptions⁹⁵ may not be accurate and applicable today.⁹⁶ Crowe states that:

91. *Id.* ¶ 33.

The State’s ability to impose sanctions on law-violators is fundamentally constrained by the need for physical proximity and physical control. This is by no means an absolute constraint; mechanisms do exist, of course, whereby individual sovereigns can impose their rules on persons or entities not physically present in the area over which the sovereign has control.

Id. ¶ 34.

92. *Id.* ¶ 4. Applying a “legal centralism,” Post notes that this ‘centralized’ form of inquiry:

focuses on alternative sets of substantive laws-with an eye toward determining which set is optimal in terms of some pre-defined criterion such as aggregate welfare. This is an entirely appropriate model for an inquiry where some law-making body-typically a sovereign government-is in a position to choose the optimal set of laws.

Id. ¶ 3 (citing Oliver W. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519, 520, 537 (1983)).

93. Beryl Crowe, *The Tragedy of the Commons Revisited* (visited Dec. 15, 1997) <<http://www.dieoff.org/page109.htm>>.

94. *Id.*

95. *See id.*

In passing the technically insoluble problems over to the political and social realm for solution, Hardin made three critical assumptions:

[I]t is apparent that the myth of the monopoly of coercive force as it was first qualified in the civil rights conflict in the South, then in our urban ghettos, next on the streets of Chicago, and . . . on our college campuses has lost its hold over the minds of Americans. The technology of guerilla warfare has made it evident that, while the state can win battles, it cannot win wars of values The factor that sustained the myth of coercive force in the past was the acceptance of a common value system. Whether the latter exists is questionable in the modern nation-state.⁹⁷

Adopting a similar point of view in regard to governmental control of the Net, Post notes that a:

state will experience obvious difficulties in attempting to monitor the behavior of individual network users, who are numerous and dispersed across many such networks. Because each such network functions as a gatekeeper for its users in cyberspace, however, we might expect that governments will try to rely instead on their ability to impose coercive

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- (1) that there exists, or can be developed, a 'criterion of judgment and system of weighting . . .' that will 'render the incommensurable . . . commensurable . . .' in real life;
 - (2) that, possessing this criterion of judgment, 'coercion can be mutually agreed upon,' and that the application of coercion to effect a solution to problems will be effective in modern society; and
 - (3) that the administrative system, supported by the criterion of judgment and access to coercion, can and will protect the commons from further desecration.

Id. at 55.

96. *Id.* at 56.

In the United States today, however, there is emerging a new set of behavior patterns which suggest that the myth is either dead or dying. Instead of believing and behaving in accordance with the myth, large sectors of the population are developing life-styles and value hierarchies that give contemporary Americans an appearance more closely analogous to the particularistic, primitive forms of 'tribal' organizations in geographic proximity than to that shining new alloy, the American civilization.

Id. at 59.

In looking for the cause of the erosion of the myth of a common value system, it seems to me that so long as our perceptions and knowledge of other groups were formed largely through the written media of communication, the American myth that we were a giant melting pot of equalitarians could be sustained. In such a perceptual field it is tenable, if not obvious, that men are motivated by interests. Interests can always be compromised and accommodated without undermining our very being by sacrificing values. Under the impact of electronic media, however, this psychological distance has broken down and now we discover that these people with whom we could formerly compromise on interests are not, after all, really motivated by interests but by values. Their behavior in our very living room betrays a set of values, moreover, that are incompatible with our own, and consequently the compromises that we make are not those of contract but of culture. While the former are acceptable, any form of compromise on the latter is not a form of rational behavior but is rather a clear case of either apostasy or heresy. Thus we have arrived not at an age of accommodation but one of confrontation. In such an age 'incommensurables' remain 'incommensurable' in real life.

Id.

97. *Id.*

sanctions on network administrators (and thereby on the network rules) in order to implement their own particular preferred set of rules on behavior in this environment.⁹⁸

Providing a modern day perspective for Hardin's work in regard to the Tragedy of the Commons, Amy Friedlander notes that:

Hardin foresaw a tragedy in part because the *commons* is ultimately a finite resource. But the economics of advanced technology does not always obey the models of classical economics, which have dealt well with fixed resources, scarcity, and competition. Indeed, an over-abundance of information resources is motivating much of the research . . . and suggests that scarcity is not a concern—although it has been argued that human attention, or “mind share”, is finite and hotly contested, and the resources to manage information are definitely limited. Still, the tension captured in Hardin's powerful analogy between what is individual and what is shared remains a useful one, and reminds us that recognizing the *commons* sometimes depends on who is leading the cow.⁹⁹

V. CONCLUSION

There is an “increasing recognition among contemporary social scientists that there is a subset of problems, such as population, atomic war, environmental corruption, and the recovery of a livable environment, for which there are no current political [(legislative)] solutions.”¹⁰⁰ Thus, it appears to be necessary to view cyberspace not as a one dimensional or purely mechanical entity. Removing this constraint removes the view that cyberspace can only be controlled by governments through laws that impose state-enforced coercive sanctions. This causes cyberspace to be viewed as a living organism that is to be shared by a diverse community of users. Randy T. Simmons' conclusion, after evaluating the pros and cons of various management issues¹⁰¹ was that resource management can be greatly improved “by relying more on property rights and market forces and less on political management.”¹⁰²

98. Post, *supra* note 77, ¶ 31.

99. Amy Friedlander, *The Tragedy of the Commons, Revisited (Again)* (visited Dec. 15, 1997) <<http://www.dlib.org/dlib/april96/04editorial.html>> (emphasis added).

100. Beryl Crowe, *The Tragedy of the Commons Revisited*, (Dec. 16, 1997) <<http://www.dlib.org/dlib/april96/04editorial.html>>.

101. The management issues included: enforcement, risk management, information costs, cost-benefit calculus, site-specific management, flexibility, incentives, innovation, time frames, priorities, and transaction costs.

102. Simmons, *supra* note 72.