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CYBERSPACE AND THE LAW OF THE HORSE
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When he was dean of this law school, Gerhard Casper was proud that the University of Chicago did not offer a course in "The Law of the Horse." He did not mean by this that Illinois specializes in grain rather than livestock. His point, rather, was that "Law and . . ." courses should be limited to subjects that could illuminate the entire law. Instead of offering courses suited to dilettantes, n1 the University of Chicago offered courses in Law and Economics, and Law and Literature, taught by people who could be appointed to the world's top economics and literature departments--even win the Nobel Prize in economics, as Ronald Coase has done.

I regret to report that no one at this Symposium is going to win a Nobel Prize any time soon for advances in computer science. 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. Well, let me be modest. I am at risk of dilettantism, and I suspect that I am not alone. 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 trailblazers.

Dean Casper's remark had a second meaning--that the best way to learn the law applicable to specialized endeavors is to study general rules. Lots of cases deal with sales of horses; others deal with people kicked by horses; still more deal with the licensing and racing of horses, or with the care veterinarians give to horses, or with prizes at horse shows. Any effort to collect these strands into a course on "The Law of the Horse" is doomed to be shallow and to miss unifying principles. Teaching 100 [*208] percent of the cases on people kicked by horses will not convey the law of torts very well. Far better for most students--better, even, for those who plan to go into the horse trade--to take courses in property, torts, commercial transactions, and the like, adding to the diet of horse cases a smattering of transactions in cucumbers, cats, coal, and cribs. Only by putting the law of the horse in the context of broader rules about commercial endeavors could one really understand the law about horses.

Now you can see the meaning of my title. When asked to talk about "Property in Cyberspace," my immediate reaction was, "Isn't this just the law of the horse?" I don't know much about cyberspace; what I do know will be outdated in five years (if not five months!); and my predictions about the direction of change are worthless, making any effort to tailor the law to the subject futile. And if I did know something about computer networks, all I could do in discussing "Property in Cyberspace" would be to isolate the subject from the rest of the law of intellectual property, making the assessment weaker.

This leads directly to my principal conclusion: Develop a sound law of intellectual property, then apply it to computer networks. Problem: we do not know whether many features of existing law are optimal. Why seventeen years for patents, a lifetime plus some for copyrights, and forever for trademarks? Should these rights be strengthened or weakened? n2 Why does copyright have the particular form it does? What sense can one make of the fuzzleball factors for fair use? How can one make these rights more precise, and therefore facilitate Coasean bargains? Until we have answers to these questions, we cannot issue prescriptions for applications to computer networks.

Cyberspace reduces the effective cost of copying. This continues a trend that began when Gutenberg invented movable type and gave rise to political demand for what has become copyright law. Yet how can we tackle the question whether copying has become too easy, and therefore should be met by countervailing changes, when we have not solved the problems posed by yesterday's technology? Consider the plain-paper photocopier. People can run off scholarly articles. To what extent may researchers copy articles from increasingly expensive journals to create a stockpile for their own future endeavors? This is a [*209] question about fair use; yet the fair-use criteria are so ambulatory that no one can give a general answer.

Just recently the Second Circuit held that copying for research within a for-profit corporation exceeded the bounds of fair use. n3 The panel was divided; another circuit is to the contrary, and the Supreme Court split 4 to 4 when

reviewing that decision. n4 Both opinions leave the impression that a dime's worth of difference in the facts would alter the outcome. Lack of certainty in the property right makes protection of intellectual property all but impossible.

The Copyright Clearance Center barely raises enough money to cover the costs of its operations. When you copy something with a CCC slug line at the bottom, which directs you to remit 50<cents> per page to a particular account number, do you do it? No, you don't, because the extent of the fair-use privilege is so hard to grasp, and because remitting would be such a bother--do you tape two quarters to a post card and mail it?

When property rights are poorly specified, it is hard to transact about them, and correspondingly hard to promote the process of transaction that allocates resources to their highest valued uses. Instead we see second-best moves. Illustration: the price of academic journals has gone through the roof. Library subscriptions often exceed \$ 500 per year; for some scientific or medical journals, the price exceeds \$ 2,000. This high price is an advance fee for photocopying, and it may be that this way the authors (and publishers) get total revenues as high as they would collect if they could charge for reprints, or if they sold more journals at lower prices. n5 The high-price-journal, cheap-copy approach not only cuts the costs of transactions (no one has to collect or remit copy fees), but also cuts the marginal cost of using intellectual property. Because intellectual property can be used without being used up, the ideal pricing mechanism is a flat fee, with no marginal cost for use.

The blanket license for the right to play music approximates this ideal two-part price. But the blanket license works because [*210] the rights for public performance of music are very well specified. Not so for copying articles.

The high subscription fee for libraries does poorly at one of the critical ingredients of the blanket license: price discrimination. ASCAP and BMI charge by a radio station's revenues, or a licensee's gross receipts. The University of Chicago pays more for its ASCAP license than does Swarthmore College. But the Journal of Financial Economics demands the same \$ 750 per year from Goldman Sachs, a business school, or a law school; it cannot discriminate as effectively as ASCAP does. So Goldman Sachs pays too little for the value received, and the University of Chicago Law School has just dropped its subscription. The pricing mechanism has not worked well, because of the difficulties in defining the property rights.

If we are so far behind in matching law to a well-understood technology such as photocopiers--if we have not even managed to create well-defined property rights so that people can adapt their own conduct to maximize total wealth--what chance do we have for a technology such as computers that is mutating faster than the virus in The Andromeda Strain?

Well, then, what can we do? By and large, nothing. If you don't know what is best, let people make their own arrangements.

Next after nothing is: keep doing what you have been doing. Most behavior in cyberspace is easy to classify under current property principles. What people freely make available is freely copyable. When people attach strings, they must be respected, and the tough question when someone copies commercial software will be whether the person making copies is a direct infringer or only a contributory infringer, and whether the remedy should be civil damages or time in prison. Lower costs of copying may make violations of the law more attractive, which suggests the allocation of additional prosecutorial resources, but movement along a cost continuum does not call for change in legal substance.

What else is there to do? I offer three themes.

1. Make rules clearer, to promote bargains. "We" don't know what is best, but in a Coasean world the affected parties will by their actions establish what is best.

The federal government's Working Group on Intellectual Property Rights recently issued a report called Intellectual Property and the National Information Infrastructure. In addition to the pompous title and the standard drumbeat of calls for more [*211] studies, this report contains a few concrete proposals. One, which I gather is controversial, is to amend the Copyright Act to beef up the distribution right. n6 The Working Group recommends that the law recognize that dissemination of copyrighted works via electronic transmission is one of the rights the copyright proprietor possesses.

One may say in response that this change gives too much to the copyright proprietor or restricts unduly the ability to disseminate works. Some people believe that copyright proprietors should be delighted to have a throng willing to transmit their works to consumers who will pay royalties for them (as a recipient clearly must do--for they get a copy whether or not a transmission is a "distribution" of the work). Perhaps so; but if this is so, the author or owner will

permit the transmission, just as song writers license the transmission of their works over the radio to people who may choose to turn on their tape recorders. An author could give this permission at large, while retaining the right to charge for the keeping of copies.

Simply put, it is awfully hard to know what the optimal compensation package for authors is, unless the property rights are clear. If something about the nature of cyberspace has made application of the distribution right cloudy, then by all means clear it up again, so that people may make their own arrangements. And on balance it is best to give these rights to authors. Why? Because if the best arrangement turns out to be free distribution, then private transactions may produce this result when the statute assigns the rights to authors; but if the best arrangement turns out to be some fee for distribution and a lower price for copying, it is extremely hard to reach this state of affairs if the statute cancels the distribution right. Private transactions could shift the right back to authors only if the parties have contractual relations (for example, patrons of the opera may agree not to tape the performances). We must bear in mind the high possibility of error in the original specification of entitlements--a risk especially high in a legislative world dominated by interest-group politics. (The copy law contains a special provision for agricultural fairs and exhibitions, still another allusion to the law of the horse!) The risk of error should lead to initial assignments that are easy to reverse, so that people may find their own way with the least interference. [*212]

2. Create property rights, where now there are none--again to make bargains possible.

Property rights in domain names is an example of what I have in mind. Until recently, domain names on the Internet were assigned by the government (rather, by a firm under contract to do the government's bidding). Allocation was first-come, first-served, with no effort to purge unused names. That led to people storing up domain names. Intellectual-property law rightly has been hostile to such maneuvers. Domain names have some of the attributes of trademarks; but one can't get a trademark by just filing. A firm must use a mark to obtain rights in it; must use the mark continuously; and once this occurs, latecomers stand behind it in line. Similarly, corporate names are registered with the states, and new arrivals cannot duplicate existing names.

The allocation of domain names is now in private hands, and the \$ 50 annual fee will abate the snatch-and-grab incentive to a limited degree. But the allocation of names remains first-come, first-served, with the result that people lay claims to famous corporate and political names. Today you can point your browser to www.clinton96.org and find, not the home page for the Clinton reelection campaign, but a satire of that campaign, with a big picture of the President holding up one finger and a caption claiming that he has a single accomplishment--election. Dick Tuck has come to cyberspace. This is nonpartisan harassment: www.dole96.org also is a satire page.

Property rights need to be better specified than that. Appropriation of names and trademarks would not be tolerated in the rest of the commercial or political world; why so for Internet addresses? In other words, we need to bring the Internet into the world of property law. I grant that, with search facilities, you can find the American Broadcasting Corporation even if someone else has www.abc.com. Nodes are in the end numbers, and conversion to letters is arbitrary. But the search process is costly and can be avoided by correct allocation in the first place.

By "correct" allocation I certainly do not mean allocation according to some government formula. We have tried that approach with broadcast licenses, and it has failed. Indeed, even in the world of over-the-air communications, the Federal Communications Commission has moved in the direction Ronald Coase and Leo Herzel pointed in the 1950s: sell frequencies at auctions. n7 So [*213] it can be with domain names. Let people bid for symbols, then sell them in a developed aftermarket. Perhaps initial allocations could be made by corporate names or product trademarks. Details are far less important than the principle that it is important to establish property rights, without which welfare-increasing bargains cannot occur.

That the Internet spans the world means some difficulty in defining property rights in names; many jurisdictions may have different ideas about optimal allocations. But the telephone system spans many legal regimes without duplication of numbers. International disagreements about patent or copyright laws are much more complex than those necessary to establish domain names.

Some other nations are jittery about the fact that no one owns or runs the Internet; it is a web of little, autonomous nets. But no one can regulate the whole process of information exchange, and even those who hate the idea of free communication have little choice but to join on the terms the participants are willing to accept. China must follow the international consensus if it wants access to other nodes.

3. Create bargaining institutions.

Computers offer many opportunities to do, at next to no cost, the sort of thing the Copyright Clearance Center has tried and failed to do for photocopies. Consider, for example, the question whether a publisher of content on the Internet wants to authorize the making of copies and, if so, the making of copies that can be recopied, or a single copy for use on a local computer. Or does the publisher only want to authorize viewing on screen? All are logical possibilities, each rational for some authors, or for any given author at different times. How is it possible to specify which is which, and to collect payment?--especially in a world where Netscape Navigator is making cache copies behind everyone's back and turning all of you into persistent infringers!

The answer, it seems to me, is a convention--a protocol under which each file contains its own instructions on this question, and programs know how to interpret them. You are familiar with such conventions. When your modem calls a remote modem, the two devices engage in elaborate interrogation to discover what speed to use and what compression and error-correction algorithms are in place. An international standards-setting organization agreed on the language; private firms all over the world [*214] have decided whether, and to what extent, to use this agreed language for communications. Some firms have come up with their own extensions, outside the organization's framework. Encryption technology is similar. You may notice that when Netscape enters a particular corner of the web, a solid key appears in the lower left of the screen; this shows that the client and the server have agreed on an encryption protocol, securing the session.

There are several available protocols. n8 So can it be with copying. A standards-setting organization could prescribe, say, twenty different copying rules--sets of permission and payment terms. There could be competing organizations, with their own standards. Each Internet server and client would understand these terms and carry out the negotiation automatically, remitting any payment to an agreed depository by secure methods.

In raising this possibility, I have in mind still a third meaning of the Law of the Horse. Gerhard Casper did not originate that phrase. It comes from Karl Llewellyn. When he was beginning the project that led to the Uniform Commercial Code, he contrasted the rules for trade between merchants with the rules for idiosyncratic transactions between amateurs, which he called the law of the horse. n9 Why hitch professionals to a wagon designed for amateurs? Llewellyn's idea, realized in the UCC, was to give merchants a menu of options from which they could choose at low cost. One option would be the presumptive rule, applied unless the merchants said otherwise.

The Working Group expresses some concern that courts would balk at enforcing such "contracts of adhesion," n10 but recent cases show that the concern is unjustified. n11 There is no reason to distinguish contract terms from any other aspect of a product's composition. A buyer of a computer does not control the quality of the circuits; the seller arranges both product attributes and contract terms. Just as no one would think of saying that the buyer of a computer with a 500 MB disk really is "entitled" to a [*215] 750 MB disk, or a faster disk, on the ground that disk size and speed is a "contract of adhesion," so it is foolish to complain about contract terms. These all are mediated by price. "Better" terms (as buyers see things) support higher prices, and sellers have as much reason to offer the terms consumers prefer (that is, the terms that consumers find cost-justified) as to offer any other ingredient of their products. It is essential to enforce these terms if markets are to work.

Repeated transactions in thick markets. That's what copying is on computer networks. Just as computers lower the cost of copying, so they expand the size and thickness of the market, and lower the cost of transacting in intellectual property, for both negotiation and payment can be done automatically once authors and users decide what terms they will accept. People tend to emphasize the effect on copying costs and disregard the effects on the size of the market and the costs of transactions; yet just as lower costs of copying pose a challenge to authors, the lower costs of transacting may represent the solution. Computers now match all trades on the London Stock Exchange; they can match trades in a virtual intellectual-property auction place. Work is under way to revise Article 2 of the UCC to supply more standard, off-the-rack rules for computer software. n12 I trust that the authors will resist the temptation to limit the range of allowable choices, rather than to write a menu containing the most popular morsels. The plan can be extended to intellectual property, either by listing options in the statute or through a private standards-setting effort.

To make this work, the author's instructions about dissemination and payment must remain with the copy. The Working Group recommends a new statute to prevent tampering with copyright protection and management systems. n13 This proposal may or may not be right in the details, but it is not clear to me that any change is necessary. Excising any part of the intellectual property likely creates a derivative work, which itself is a subject of control under current law. This is not the time or place to get into details, however.

A quick summary: Error in legislation is common, and never more so than when the technology is galloping forward. Let us not struggle to match an imperfect legal system to an evolving world that we understand poorly. Let us

instead do what is essential to permit the participants in this evolving world to make their own decisions. That means three things: make rules clear; create property rights where now there are none; and facilitate the formation of bargaining institutions. Then let the world of cyberspace evolve as it will, and enjoy the benefits.

FOOTNOTES:

n1 "One finds more than a few courses in law schools entitled 'Law and ' in which the blank is indeed intellectually blank." Michael Tonry and Norval Morris, Retirement of Sheldon Messinger, *80 Cal L Rev* 310 (1992).

n2 See William M. Landes and Richard A. Posner, An Economic Analysis of Copyright Law, *18 J Legal Stud* 325 (1989).

n3 *American Geophysical Union v Texaco, Inc.*, *60 F3d 913 (2d Cir 1995)*. See also William Patry, American Geophysical Union v Texaco, Inc.: Copyright and Corporate Photocopying, *61 Brooklyn L Rev* 429 (1995).

n4 *Williams & Wilkins Co. v United States*, *487 F2d 1345 (Ct Cl 1973)*, aff'd by an equally divided Court, *420 US 376 (1975)*.

n5 See S. J. Liebowitz, Copyright Law, Photocopying, and Price Discrimination, *8 Research in Law & Economics* 181 (1986).

n6 Working Group on Intellectual Property Rights, Intellectual Property and the National Information Infrastructure 193 (1995) ("Working Group Report").

n7 R.H. Coase, The Federal Communications Commission, *2 J L & Econ* 1 (1950); Comment, Leo Herzel, "Public Interest" and the Market in Color Television Regulation, *18 U Chi L Rev* 802 (1951).

n8 The process can be automatic and secure. Netscape's security methods are simple compared with those used at MIT, which, despite the greatest concentration of bright hackers on the planet, has never had a security breach. See Jeffrey I. Schiller, Secure Distributed Computing, *271 Scientific American* 66 (Nov 1994).

n9 Karl N. Llewellyn, Across Sales on Horseback, *52 Harv L Rev* 725, 735, 737 (1939); Karl N. Llewellyn, The First Struggle to Unhorse Sales, *52 Harv L Rev* 873 (1939).

n10 See, for example, Working Group Report at 49-50 (cited in note 6).

n11 See, for example, *Vimar Seguros Y Reaseguros, S.A. v M/V Sky Reefer*, *115 S Ct* 2322 (1995); *Carnival Cruise Lines, Inc. v Shute*, *499 US* 585 (1991).

n12 See Working Group Report at 53 (cited in note 6).

n13 Id at 212-213 (analysis), App I 5-12 (draft legislation).