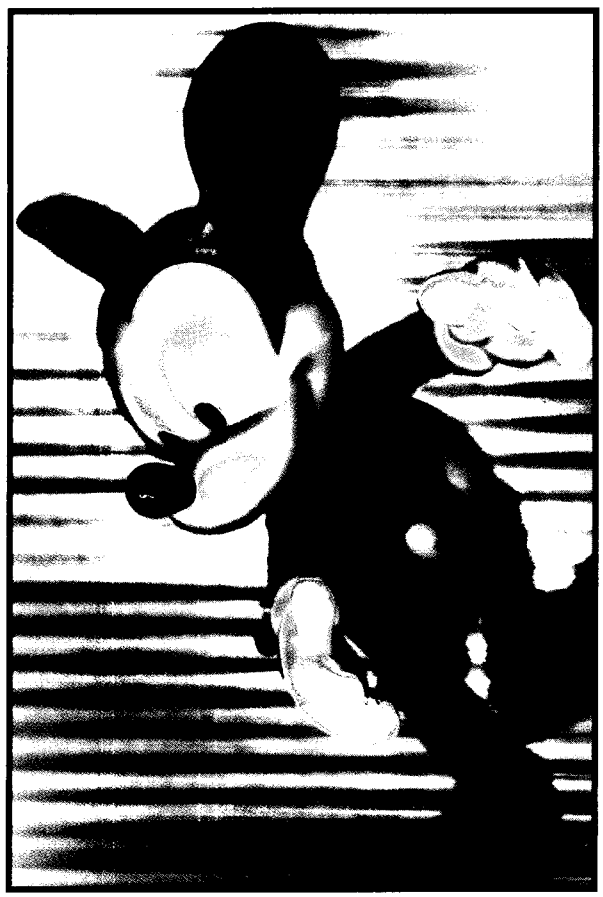
CONTROL & CREATIVITY

The future of ideas is in the balance

BY LAWRENCE LESSIG

The Internet puts two futures in front of us, the one we seem to be taking and the one we could. The one we seem to be taking is easy to describe. Take the Net, mix it with the fanciest TV, add a simple way to buy things, and that's pretty much it.

Though I don't (yet) believe this view of America Online, it is the most cynical image of Time Warner's marriage to AOL: the forging of an estate of large-scale networks with power over users to an estate dedicated to almost perfect control over content, through intellectual property and other government-granted exclusive rights. The promise of many-to-many communication that defined the early Internet will be replaced by a reality of many, many ways to buy things and many, many ways to select among what is offered. What gets offered will be just what fits within the current model of the concentrated systems of distribution. Cable television on speed, addicting a much more manageable, malleable and sellable public.



The future that we could have is much harder to describe. It is harder because the very premise of the Internet is that no one can predict how it will develop. The architects who crafted the first protocols of the Net had no sense of a world where grandparents would use computers to keep in touch with their grandkids. They had no idea of a technology where every song imaginable is available within thirty seconds' reach. The World Wide Web was the fantasy of a few MIT computer scientists. The perpetual tracking of preferences that allows a computer in Washington state to suggest an artist I might like because of a book I just purchased was an idea that no one had made famous before the Internet made it real.

Yet there are elements of this future that we can fairly imagine. They are the consequences of falling costs, and hence falling barriers to creativity. The most dramatic are the changes in the costs of distribution; but just as important are the changes in the costs of production. Both are the consequence of going digital: Digital technologies create and replicate reality much more efficiently than non-digital technology does. This will mean a world of change.

Skip ahead to just a few years from now and think about the new potential for creativity. The cost of filmmaking is a fraction of what it was just a decade ago. The same is true for the production of music or any digital art. Digital tools dramatically extend the horizon of opportunity for those who could create something new.

And not just for those who would create something "totally new," if such an idea were even possible. Think about the ads from Apple Computer urging that "consumers" do more than simply consume:

Rip, mix, burn.
After all, it's your music.

Apple, of course, wants to sell computers. Yet their ad touches an ideal that runs very deep in our history. For the technology that they (and of course others) sell could enable this generation to do with our culture what generations have done from the very beginning of human society: to take what is our culture; to "rip" it—meaning to copy it; to "mix" it—meaning to re-form it

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however the user wants; and finally, and most important, to "burn" it—to publish it in a way that others can see and hear.

We now have the potential to expand the reach of this creativity to an extraordinary range of culture and commerce. Technology could enable a whole generation to *create*—remixed films, new forms of music, digital art, a new kind of storytelling, writing, a new technology for poetry, criticism, political activism—and then, through the infrastructure of the Internet, *share* that creativity with others.

The future that I am describing is as important to commerce as to any other field of creativity. Though most distinguish innovation from creativity, or creativity from commerce, I do not. The network that I am describing enables both forms of creativity. It would leave the network open to the widest range of commercial innovation; it would keep the barriers to this creativity as low as possible.

Already we can see something of this potential. The open and neutral platform of the Internet has spurred hundreds of companies to develop new ways for individuals to interact. Public debate is enabled, by removing perhaps the most significant cost of human interaction—synchronicity. I can add to your conversation tonight; you can follow it up tomorrow; someone else, the day after.

The technology will only get better. And contrary to the technology-doomsayers, this is a potential for making human life more, not less, human.

But just at the cusp of this future, at the same time that we are being pushed to the world where anyone can "rip, mix [and] burn," a countermovement is raging all around. To ordinary people, this slogan from Apple seems benign enough; to the lawyers who prosecute the laws of copyright, the very idea that the music on "your" CD is "your music" is absurd. "Read the license," they're likely to demand. "Read the law," they'll say, piling on. This culture that you sing to yourself, or that swims all around you, this music that you pay for many times over—when you hear it on commercial radio, when you buy the CD, when you pay a surplus at a large restaurant so that they can play the same music on their speakers, when you purchase a movie ticket where the song is the theme—this music *is not yours*. You have no "rights" to rip it, or to mix it, or especially to burn it. You may have, the lawyers will insist, *permission* to do these things. But don't confuse Hollywood's grace with your rights. These parts of our culture, these lawyers will tell you, are the property of the few. The law of copyright makes it so, even though the law of copyright was never meant to create any such power.

Indeed, the best evidence of this conflict is again Apple itself. For the very same machines that Apple sells to "rip, mix [and] burn" music are programmed to make it impossible for ordinary users to "rip, mix [and] burn" Hollywood's movies. Try to "rip, mix [and] burn" Disney's *102 Dalmatians* and it's your computer that will get ripped, not the content. Software, or *code*, protects this content, and Apple's machine protects this code.

This struggle is just a token of a much broader battle, for the model that governs film is slowly being pushed to every other kind of content. The changes we will see affect every front of human creativity. They affect commercial as well as noncommercial, the arts as well as the sciences. They are as much about growth and jobs as they are about music and film. And how we decide these questions will determine much about the kind of society we will become. It will determine what the "free" means in our self-congratulatory claim that we are now, and will always be, a "free society."

It is best described as a *constitutional* question: It is about the fundamental values that define this society and whether we will allow those values to change. Are we, in the digital age, to be a free society? And what precisely would that idea mean?

FREE SPEECH? FREE BEER?

Every society has resources that are *free* and resources that are *controlled*. Free resources are those available for the taking. Controlled resources are those for which the permission of someone is needed before the resource can be used. Einstein's theory of relativity is a free resource. You can take it and use it without the permission of anyone. Einstein's last residence in Princeton, New Jersey, is a controlled resource. To sleep at 112 Mercer Street requires the permission of the Institute for Advanced Study.

Over the past hundred years, much of the heat in political argument has been about which system for controlling resources—the state or the market—works best.

That war is over. For most resources, most of the time, the market trumps the state.

This, however, is a new century; our questions will be different. The issue for us will not be which system of exclusive control—the government or the market—should govern a given resource, but whether that resource should be *controlled* or *free*.

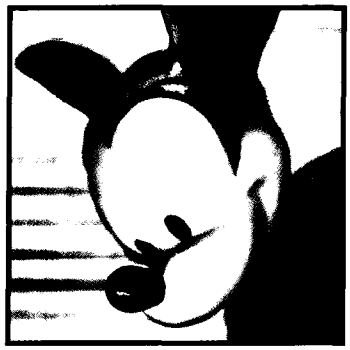
So deep is the rhetoric of control within our culture that whenever one says a resource is "free," most believe that a price is being quoted—free, that is, as in zero cost. But "free" has a much more fundamental meaning—in French, *libre* rather than *gratis*, or for us non-French speakers, and as the philosopher of our age and founder of the Free Software Foundation, Richard Stallman, puts it, "free, not in the sense of free beer, but free in the sense of free speech." A resource is "free" if 1) one can use it without the permission of anyone else; or 2) the permission one needs is granted neutrally. So understood, the question for our generation will be not whether the market or the state should control a resource, but whether that resource should remain free.

This is not a new question, though we've been well trained to ignore it. Free resources have always been central to innovation, creativity and democracy. The roads are free in the sense I mean; they give value to the businesses around them. Central Park is free in the sense I mean; it gives value to the city that it centers. A jazz musician draws freely upon the chord sequence of a popular song to create a new improvisation, which, if popular, will itself be used by others. Scientists plotting an orbit of a spacecraft draw freely upon the equations developed by Kepler and Newton and modified by Einstein. Inventor Mitch Kapor drew freely upon the idea of a spreadsheet—VisiCalc—to build the first killer application for the IBM PC—Lotus 1-2-3. In all of these cases, the availability of a resource that remains outside of the exclusive control of someone else—whether a government or a private individual—has been central to progress in science and the arts. It will also be central to progress in the future.

Free resources have nothing to do with communism. (The Soviet Union was not a place with either free speech or free beer.) Neither are the resources that I am talking about the product of altruism. I am not arguing that there is "such a thing as a free lunch." There is no manna from heaven. Resources cost money to produce. They must be paid for if they are to be produced.

But how a resource is *produced* says nothing about how *access* to that resource is granted. Production is different from consumption.

And while the ordinary and sensible rule for most goods is the "pay me this for that" model of the local convenience store, a second's reflection reveals that there is a wide range of resources that we make available in a completely different way.



The choice is not between all or none. Obviously many resources must be controlled if they are to be produced or sustained. I should have the right to control access to my house and my car. You shouldn't be allowed to rifle through my desk. Microsoft should have the right to control access to its source code. Hollywood should have the right to charge admission to its movies. If one couldn't control access to these resources, or resources called "mine," one would have little incentive to work to produce these resources, including those called mine.

But likewise, and obviously, many resources should be free. The right to criticize a government official is a resource that is not, and should not be, controlled. I shouldn't need the permission of the Einstein estate before I test his theory against newly discovered data. These resources and others gain value by being kept free rather than controlled. A mature society realizes that value by protecting such resources from both private and public control.

No modern phenomenon better demonstrates the importance of free resources to innovation and creativity than the Internet. To those who argue that control is necessary if innovation is to occur, and that more control will yield more innovation, the Internet is the simplest and most direct reply. For the defining feature of the Internet is that it leaves resources free. The Internet has provided for much of the world the greatest demonstration of the power of freedom—and its lesson is one we must learn if its benefits are to be preserved.

From the economics of "real space"—where records are now made, books are still written, and film is primarily shot—to the virtual domains where they increasingly are distributed, the context of creativity has been transformed by the Internet. Many of the constraints that affected real-space creativity have been removed by the architecture, and original legal context, of the Internet. These limitations, perhaps justified before, are justified no more.

But the Internet itself is also changing. Features of the architecture—both legal and technical—that originally created this environment of free creativity are now being altered. They are being changed in ways that will re-introduce the very barriers that the Internet originally removed.

There are strong reasons why many are trying to rebuild these constraints: They will enable these existing and powerful interests to protect themselves from the competitive threat the Internet represents. The old, in other words, is bending the Net to protect itself against the new.

MICKEY MOUSE BLOAT

The distinctive feature of modern American copyright law is its almost limitless bloating—its expansion both in scope and in duration. The framers of the original Copyright Act would not begin to recognize what the act has become.

The first Copyright Act gave authors of "maps, charts and books" an exclusive right to control the publishing and vending of these works, but only if their works had been "published," only after the works were registered with a copyright registry, and only if the authors were Americans. (Our outrage at China notwithstanding, we should remember that before 1891, the copyrights of foreigners were not protected in the United States. We were born a pirate nation.)

This initial protection did not restrict "derivative" works: One was free to translate an original work into a foreign language, and one was free to make a play out of a novel without the original author's permission. And because of the burdens of registering, most works were not copyrighted. Between 1790 and 1799, 13,000 titles were published in America, but only 556 copyright registrations were filed. The vast majority of creative work was free for others to use; and the work that was protected was protected only for limited purposes.

After two centuries of copyright statutes, the scope of copyright has exploded, and the reach of copyright is now universal. There is no registration requirement—every creative act reduced to a tangible medium is now subject to copyright protection. Your e-mail to your child or your child's finger painting: both are automatically protected.

This protection is not just against competing publications. The target is not simply piracy. Any act of "copying" is presumptively regulated by the statute; any derivative use is within the reach of this regulation. We have gone from a regime where a tiny part of creative content was controlled to a regime where most of the most useful and valuable creative content is controlled for every significant use.

The first Congress to grant copyright gave authors an initial term of 14 years, which could be renewed for 14 years if the author was living. The current term is the life of the author plus 70 years—which, for an author like Irving Berlin, would mean a protection of 140 years. More disturbingly, we have come to this expanded term through an increasingly familiar practice in Congress of extending the term of copyright both prospectively (to works not yet created) and retrospectively (to works created and still under copyright).

In the next 50 years, it extended the term once again. In the last 40 years, Congress has extended the term of copyright retrospectively 11 times. Each time, it is said with only a bit of exaggeration, that Mickey Mouse is about to fall into the public domain, the term of copyright for Mickey Mouse is extended.

You might think that there is something a bit unfair about a regime where Disney can make millions off stories that have fallen into the public domain but no one else but Disney can make money off Disney's work—apparently forever. But even if the scope of controlled content has grown, in principle there remains a constitutional limitation on this expansion. Some content is to stay in the commons, even if most useful content remains subject to control.

PIANO ROLLS

Control is not necessarily bad. Copyright is a critical part of the process of creativity; a great deal of creativity would not exist without the protections of the law. Large-budget films could not be produced; many books would not get written.

But just because some control is good, it doesn't follow more is better. As conservative Federal Circuit Judge Richard Posner has written, "[T]he absence of copyright protection is, paradoxical as this may seem, a benefit to authors as well as a cost to them."

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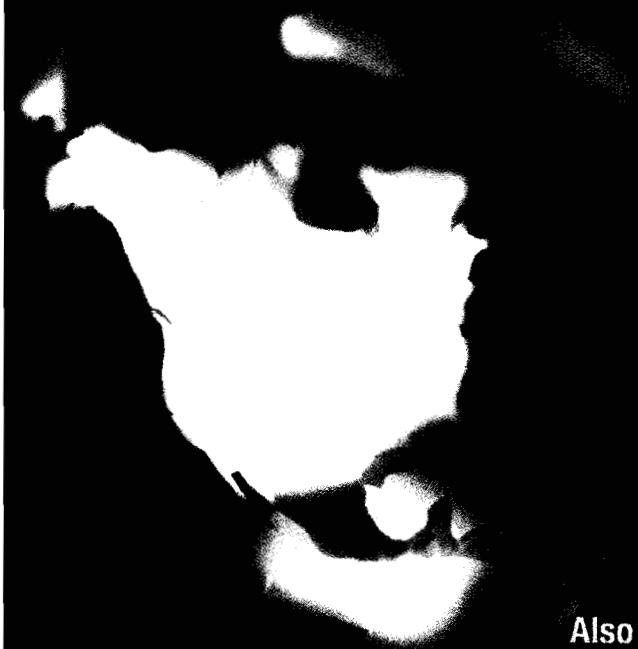

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It is a benefit because, as we've seen already, creative works are both an input and an output in the creative process; if you raise the cost of the input, you get less of the output.

More important, limited protection has always been the rule. Never has Congress embraced or the Supreme Court permitted a regime that guaranteed perfect control by copyright owners over the *use* of their copyrighted material. As the Supreme Court has said, "[T]he Copyright Act does not give a copyright holder control over all uses of his copyrighted work."

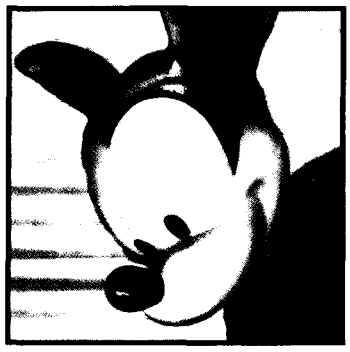
Instead, Congress has struck a balance between assuring that copyright owners are compensated and assuring that an adequate range of material remains in the public domain for others to draw upon and use. And this is especially true when Congress has confronted new technologies.

Consider the example of "piano rolls." In the early 1870s, Henri Fourneaux invented the player piano, which recorded music on a punch tape as a pianist played the music. The result was a high-quality copy (relative to the poor quality of phonograph recordings at the time) of music, which could then be copied and played any number of times on other machines. By 1902, there were "about seventy-five thousand player pianos in the United States, and over one million piano rolls were sold."

Authors of sheet music complained, saying that their content had been stolen. In terms that echo the cries of the recording industry today, copyright holders charged that these commercial entities were making money off their content, in violation of the copyright law.

The Supreme Court disagreed. Though the content the piano player played was taken from sheet music, it was not, the Court held, a "copy" of the music that it, well, copied. Piano roll manufacturers (and record companies, too) were therefore free to "steal" the content of the sheet music to make money with their new inventions.

Congress responded quickly to the Court's decision by changing the law. But the change was an interesting compromise. The new law did not give copyright holders perfect control over their copyrighted material. In granting authors a "mechanical reproduction right," Congress gave authors the exclusive right to decide whether and on what terms a recording of their music could be made. But once a recording had been made, others had the right (upon paying 2 cents per copy) to make subsequent recordings of the same music—*whether or not the original author granted permission.* This was a "compulsory licensing right," which Congress granted copiers of copyrighted music to assure that the original owners of the copyrighted works would not get too much control over subsequent innovation with that work.



The effect of this compromise, though limiting the rights of original authors, is to expand the creative opportunity of others. New performers had the right to break into the market, by taking music made famous by others and re-recording it, after the payment of a small compulsory fee. Again, the amount of this fee was set by the statute, not by the market power of the author. It therefore was a far less powerful "exclusive right" than the exclusive right granted to other authors.

This balance is the rule, not the exception, when Congress has confronted a new technology affecting creative rights. It did the same thing with the first real "Napster" in our history—cable television. Cable TV was born stealing the content of others and re-selling that content to consumers. Suppliers of cable services would set up an antenna, capture the commercial broadcasts made by television stations, and then resell those broadcasts to their customers.

The copyright holders did not like this "theft." Twice they asked the Supreme Court to shut it down. Twice the Court said no. So it fell to Congress to strike a balance between cable TV and copyright holders. Congress in turn followed the model set by player pianos: Cable TV had to pay for the content it broadcast, but the content holders did not have an absolute right to grant or deny the right to broadcast its content. Instead, cable TV got a compulsory licensing system to guarantee that cable operators would be able to get permission to broadcast content at a relatively modest level. Thus content holders, or broadcasters, couldn't leverage their power in the television broadcasting market into power in the cable services market. Innovation in the latter field was protected from power in the former.

These are not the only examples of Congress striking a balance between compensation and control. For a time there was a compulsory license for jukeboxes; there is a compulsory license for music and certain pictorial works in noncommercial television and radio broadcasts; there is a compulsory licensing scheme governing satellite television systems, digital audio home recorders and digital audio transmissions.

These "compromises" give the copyright holder a guarantee of compensation without giving the copyright holder perfect control. The epitome of copyright's protection, they represent the aim to give authors not perfect control of their copyrighted work, but a balanced right that does what the Constitution requires—"promote progress."

The unavoidable conclusion about changes in the scope of copyright's protections is that the extent of "free content"—meaning content that is not controlled by an exclusive right—has never been as limited as it is today. More content is controlled by law today than ever in our past. In addition to limited compulsory rights, an author is free to take from work published before 1923; is free to take noncreative work (facts) whenever published; and is free to use, consistent with fair use, a limited degree of others' work. Beyond that, however, the content of our culture is controlled by an ever-expanding scope of copyright.

SAVE PORN, KILL NAPSTER?

Courts are policy makers, and they must ask how best to respond. Should they respond by intervening immediately to remedy the "wrong" said to exist as a result of the Internet's concussive impact? Or should they wait to allow the system to mature, and to see just what harm there is?

In the context of porn, privacy and taxation, courts and the government have insisted that we should wait to see how the network develops.

In the context of copyright, the response has been different. Pushed by an army of high-powered lawyers, greased with piles of money from PACs, Congress and the courts have jumped into action to defend the old against the new.

Ordinary people might find these priorities a bit odd. After all, the recording industry continues to grow at an astounding rate.

Annual CD sales have tripled in the past ten years. Yet the law races to support the recording industry, without any showing of harm. (Indeed, possibly the opposite: when Napster usage fell after the court-restricted access, album sales fell as well. Napster may indeed have helped sales rather than hurting them.)

At the same time, it can't be denied that the Net has reduced the ability that parents have to protect their children. Yet the law says, "Wait and see, let's make sure we don't harm the growth of the Net." In one case—where the harm is the least—the law is most active; and in the other—where the harm is most pronounced—the law stands back.

Indeed, the contrast is even stronger than this, and it is this that gets to the heart of the matter.

The Internet exposes unprecedented realms of copyrighted content to theft, but it also makes it possible (with the proper code) to control the use of copyrighted material much more fully than before. And it opens up a range of technologies for production and distribution that threaten the existing establishment.

Congress can address the increased exposure to theft, however, without a protectionist regime for existing media control. *Control*, however, is precisely Hollywood's and the recording labels' objective. In the context of copyright law, the industry has been very clear: Its aim, as RIAA president Hilary Rosen has described it, is to assure that no venture capitalist invests in a start-up that aims to distribute content unless that start-up has the approval of the recording industry. This industry thus demands the right to veto new innovation, and it invokes the law to support its veto right.

Some see these cases (in particular the MP3.com and Napster cases) as simple; I find them very hard. But whether they are simple or hard, Congress could intervene to strike a balance between the right of copyright holders to be compensated and the right of innovators to innovate.

The model for this intervention is the compulsory license. The first real Napster case was cable television. Congress's aim in part was to assure that the cable industry could develop free of the influence of the broadcasters. The broadcasters were a powerful industry; Congress felt—rightly—that cable would grow more quickly and innovate more broadly if it was not beholden to the power of broadcasters. So Congress cut any dependency that the cable industry might have, by assuring it could get access to content without yielding control.

The same solution—compensation without control—is available today. But instead, copyright interests are in effect getting more control over copyright in cyberspace than they had in real space, even though the need for more control is less clear. We are locking down the content layer, and handing over the keys to Hollywood.

Intellectual property is both an input and an output in the creative process; increasing the "costs" of intellectual property increases both the cost of production and the incentives to produce. Which side outweighs the other can't be known *a priori*. "An expansion of copyright protection," Judge Posner argues, "might...reduce the output of literature...by increasing the royalty expense of writers." Thus the idea mix cannot be found simply by increasing the power of copyright holders to control.

Other conservatives are a bit more colorful about the point. Consider, for example, Judge Alex Kozinski, one of the brightest stars of the Ninth Circuit Court of Appeals—the "Hollywood Circuit." When his fellow justices upheld game-show hostess Vanna White's right to control the use of her symbolic image, Kozinski sharply dissented. As he wrote:

> Something very dangerous is going on here. Private property, including intellectual property, is essential to our way of life. It provides an incentive for investment and innovation; it stimulates the flourishing of our culture; it protects the moral entitlements of people to the fruits of their labors. But reducing too much to private property can be bad medicine.

Why? For the same reasons we've been tracking.

> Private land...is far more useful if separated from other private land by public streets, roads and highways. Public parks, utility rights-of-way and sewers reduce the amount of land in private hands, but vastly enhance the value of the property that remains.

The state must therefore find a balance, and this balance will be struck between overly strong and overly weak protection.

> Overprotecting intellectual property is as harmful as underprotecting it. Creativity is impossible without a rich public domain.

But is that unfair? Is it unfair that someone gets to profit off someone else's ideas? No, says Kozinski:

> Intellectual property law assures authors the right to their original expression, but encourages others to build freely on the ideas that underlie it. This result is neither unfair nor unfortunate: It is the means by which intellectual property law advances the progress of science and art. We give authors certain exclusive rights, but in exchange we get a richer public domain.

This balance reflects something important about this kind of creativity: that it is always building on something else.

> Nothing today, likely nothing since we tamed fire, is genuinely new: Culture, like science and technology, grows by accretion, each new creator building on the works of those who came before. Overprotection stifles the very creative forces it's supposed to nurture.

This balance is necessary, Kozinski insists, "to maintain a free environment in which creative genius can flourish." Not because "flourish[ing]" innovation is the darling of the Left; but because innovation and creativity was the ideal of our founding, Enlightenment Republic.

THE DIGITAL DILEMMA

In proliferating forms of signatures, searches, sorts and surveillance, digital technology, tied to law, now promises almost perfect control over content and its distribution. And it is this perfect control that threatens to undermine the potential for innovation that the Internet promises.

To reestablish a balance between control and creativity, our aim should be to give artists enough incentive to produce, while leaving free as much as we can for others to build upon and create.

We live in a world with "free" content, and this freedom is not an imperfection. We listen to the radio without paying for the songs we hear; we hear friends humming tunes that they have not licensed. We refer to plots in movies to tell jokes without the permission of the director. We read books to our children borrowed from a library without any payment for performance rights to the original copyright holder. The fact that content at any particular time is free tells us nothing about whether using that content is "theft." Similarly, an argument for increasing control by content owners needs more than "they didn't pay for this use" to back up the argument.

Creation is always the building upon something else. There is no art that doesn't reuse. And there will be less art if every reuse is taxed by the earlier appropriator. Monopoly controls have been the exception in free society; they have been the rule in closed societies. Before a monopoly is permitted, there should be reason to believe it will do some good—for *society*, and not just for monopoly holders.

With these ideals in mind, here are some first steps to freeing culture:

BLACK HOLE OF COPYRIGHT

Authors and creators deserve to receive the benefits of their creation. But when those benefits stop, what they create should fall into the public domain. It does not do so now. Every creative act reduced to a tangible medium is protected for upward of 150 years, whether or not the protection benefits the author. This work thus falls into a copyright black hole, unfree for over a century.

The solution to this black hole of copyright is to force those who benefit from copyright to take steps to protect their state-backed benefit. And in the age of the Internet, those steps could be extremely simple.

Work that an author "publishes" should be protected for a term of five years once registered, and that registration can be renewed fifteen times. If the registration is not renewed, then the work falls into the public domain.

Registration need not be difficult. The U.S. Copyright Office could run a simple Web site where authors register their work. That Web site could be funded by charges for copyright renewals. When an author wants to renew the copyright, the system could charge the author a renewal fee. That fee might increase over time or depend upon the nature of the work.

"Unpublished works" would be different. If I write an e-mail and send it to a group of my friends, that creativity should be treated differently from the creativity of a published book or recorded song. The e-mail should be protected for privacy reasons, the song and book protected as a quid pro quo for a government-backed monopoly. Thus, for private, unpublished correspondence, I think the current protection is perfectly sensible: the life of the author plus seventy years, automatically created, with no registration or renewal requirements.

One of the strongest reasons that the copyright industry has raised for the elimination of this renewal requirement is the injustice that comes from a family's or author's losing copyright protection merely because of a technicality. If "technicality" means something like the registration was lost in the mail or was delivered two hours late, then the complaint is a good one. There is no reason to punish authors for slips. But the remedy for an overly strict system is a more relaxed system, not no system at all. If a registration is lost, or a deadline missed by a short period of time, the U.S. Copyright Office should have the power to forgive.

A change in the copyright term would have no effect on the incentives for authors to produce work today. There is no author who decides whether or not to write a book depending upon whether he or his estate will receive money three-quarters of a century from now. The same with a film producer: Hollywood studios forecast revenues a few years into the future, not ninety-five. The effect on expected income from this change would therefore be tiny.

But the benefit for creativity from more works falling into the commons would be large. If a copyright isn't worth it to an author to renew a copyright for a modest fee, then it isn't worth it to society to support—through an array of criminal and civil statutes—the monopoly protected. But the same work that the original author might

not value could well be used by other creators in society.

Software is a special case. The current protection for software is the life of an author plus 70 years or, if work-for-hire, 95 years. This is a parody of the Constitution's requirement that copyright be for "limited times." When Apple's Macintosh operating system falls into the public domain, there will be no machine that could possibly run it. The term of copyright for software is effectively unlimited.

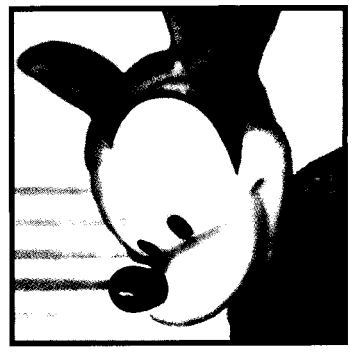
Worse, the copyright system protects software without getting any new knowledge in return. When the system protects Hemingway, we at least get to see how Hemingway writes. We get to learn about his style and the tricks he uses to make his work succeed. We can see this because it is the nature of creative writing that the writing is public. There is no such thing as language that doesn't simultaneously transmit its words.

The reason copyright law doesn't include source code is that it is believed that that would make the software unprotectable. The open code movement might throw that view into doubt, but even if one believes it, the remedy—no source code—is worse than the harm. There are plenty of ways for software to be protected without the protection of law. Copy protection systems, for example, give the copyright holder plenty of control over how and when the software is copied.

If society is to give software producers more protection than they otherwise would take, then we should get something in return. And one thing we could get would be access to the source code after the copyright expires. Thus, I would protect software for a term of five years, renewable once. But that protection would be granted only if the author submitted a copy of the source code to be held in escrow while the work was protected. Once the copyright expired, that escrowed copy would be publicly available from the Copyright Office server.

PROTECTING MUSIC

The Net has created a world where content is free. Napster is the most salient example of this world, but it is not the only one. At any time a user can select the channel of music he or she wants. A song from your childhood? Search on the lyrics and find a recording. Within seconds you can hear any music you want.



This freedom the recording industry calls theft. But they don't call it theft when I hear an old favorite of mine on the radio. They don't call it theft when they are recording takeoffs of prior recorded music. And they don't call it theft when they make a new version of "Jingle Bells." They don't, in other words, call it theft when *they* are using music for free that has been defined by the copyright system to be fair and appropriate use.

Artists should be paid, but it doesn't follow that selling music like chewing gum is the only possible way. Congress has often had to balance the rights of free access against the rights of control. When the courts said piano rolls were not "copies" of sheet music, Congress balanced the rights of composers against the rights to mechanically reproduce what was composed. It balanced these rights through a compulsory license that enabled payment to artists while assuring free access to the work produced. A similar solution was reached for cable TV. Congress protected rights holders, but not through a *property* right.

The same solution is possible in the context of music on the Net. But here, rather than balance, the rhetoric is about "theft" and "crime." Congress should empower file sharing by recognizing a similar system of compulsory licenses. These fees should not be set by an industry set on killing this new mode of distribution. They should be set, as they have always been set, by a policy maker keen on striking a balance. If only such a policy maker were somewhere to be found.

REBUILDING THE COMMONS

Copyright was originally simply a restriction on commercial entities, regulating "publishers" and those who "vend" "maps, charts and books." Because the law slipped into using the term "copy" in 1909, it has now extended its reach to every act of duplication, by printing press or computer memory. It now therefore covers actions far beyond the "commercial" exploitation of anything.

The Net itself, however, has now erased any effective distinction between commercial and noncommercial. Napster no doubt is a commercial activity, though the sharing that Napster enables is not. This line-drawing problem reinforces my own view that the better solution is simply to go back to the Framers' notion of limited times.

If copyright were returned to a meaningfully "limited time," then we wouldn't need to worry so much about drawing commercial vs. noncommercial distinctions. For five, or maybe 10 years, commercial entities would hold these rights exclusively. Beyond that, the music, like culture generally, would be freely available.

The urgency in the field of patents is even greater. Here again, patents are not per se evil; they are evil only if they do no *social* good. They do no *social* good if they benefit certain companies at the expense of innovation generally. And as many have argued convincingly, that's just what many patents today do.

If Congress determines that business method patents are justified, it should also consider the proposals of Jeff Bezos and Tim O'Reilly to grant patent protection for business methods for only a very short period. Bezos proposes five years, but an even shorter period may make sense. Network technologies move so quickly that a longer period of protection is not really needed; and whatever distortions this system might produce, they can be minimized by shortening the period of protection.

Congress should also, and most obviously, radically improve funding for the Patent Office, and mandate fundamental improvements in its functioning.

These changes are just beginnings, but they would be significant beginnings if done. They would together go a great distance in assuring that the space for innovation remains open and that the resources for innovation remain free. They would commit us to an environment that would preserve the innovation we have seen and help fulfill the liberating promise of the Net.

The American Spectator Playmate of the Month

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