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Getting Our Values around Copyright Rights



This article is based on Lawrence Lessig's keynote address at the EDUCAUSE 2009 Annual Conference, Denver, Colorado, November 5, 2009.

By Lawrence Lessig

I plan to make three observations on the way to stating an argument on the way to proposing what we can do in a debate that I think educators need to take more seriously.

Observation #1

When anybody talks about copyright, we have to remember that there's an extraordinarily large elephant in the room. The "elephant" I mean is this: in the past, in the history of culture across the world and in the United States, copyright had a tiny role. A tiny bit of the ordinary way in which people engaged with their culture was regulated by copyright.

In 1994, Jessica Litman noted: "At the turn of the century [1900], U.S. copyright law was technical, inconsistent, and difficult to understand, but it didn't apply to very many people or very many things. If one were an author or publisher of books, maps, charts, paintings, sculpture, photographs, or sheet music, a playwright or producer of plays, or a printer, the copyright law bore on one's business. [But] booksellers, piano-roll and phonograph record publishers, motion picture producers, musicians, scholars, members of Congress, and ordinary consumers could go about their business without ever encountering a copyright problem."¹

Then things changed, radically. Copyright now reaches across the spectrum of ways in which we engage in our culture. Litman continued: "Ninety years later, the U.S. copyright law is even more technical, inconsistent, and difficult to understand; more importantly, it touches everyone and everything. . . . Technology, heedless of law, has developed modes that insert multiple acts of reproduction and transmission—potentially actionable events under the copyright statute—into

commonplace daily transactions. Most of us can no longer spend even an hour without colliding with the copyright law."²

Why the change? The critical thing to recognize is that there's a technical reason for that change—a reason that ties the architecture of digital technology to the architecture of copyright law. If copyright law, at its core, regulates something called "copies," then in the analog world, the turn-of-the-last-century world that Litman was speaking about, many uses of culture were copyright-free. They didn't trigger copyright law because no copy was made.

The platform through which we get access to our culture has changed—changed radically.



But in the digital world, practically all uses of culture produce a copy and thus trigger copyright. Think about a physical book in real space. Reading, giving away, and selling a book are all uses that are technically unregulated by the law. To read a book is not a fair use of the book; it's a free use of the book because to read a book is not to produce a copy. To give someone a book is not a fair use of the book; in the United States, it's a free use of the book because to give someone a book is not to produce a copy. To sell a book is not a fair use of the book; it's a free use of the book—in the United States, at least—explicitly exempted from the regulation of copyright law because to sell a book is not to produce a copy.

These unregulated uses of culture are then balanced by a set of important regulated uses that are necessary to produce the incentives that artists and creators need in order to produce great new work. So, to *publish* a book requires permission from the copyright owner. Then, in the American tradition, there is a thin sliver of exceptions called "fair uses"—uses that otherwise would have been regulated by the law but that the law says have to remain free to ensure that the right set of incentives we're building for our culture are preserved.

Enter the Internet, where every single use produces a copy. What this means is that the balance between unregulated-regulated and fair uses radically changes. This is merely because the *platform* through which we get access to our culture has changed—changed radically. It is not because anybody in Washington was thinking about uses of culture; it is because the technology through which we get access to our culture has changed. *That* is the elephant in the room—the elephant we have to keep in focus as we think about this issue.

Observation #2

Consider the idea of a paradigm case. The Fourth Amendment to the Constitution of the United States declares: "The right of the people to be secure in

their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.” The Fourth Amendment protects people against unreasonable searches and seizures. The paradigm case behind the Fourth Amendment was the search warrant, which permits authorities to enter into a building and search for evidence of a crime. Protection from trespass was at the core of the protections that it granted. The framers of the Fourth Amendment didn’t think about a technology like wiretapping, of course. In wiretapping, no one has to trespass on anybody’s property in order to effect the search that a wiretap makes possible. It’s outside the scope of the paradigm case.

Or think about Article 1, Section 8, Clause 11—the War Powers Clause: “The Congress shall have power . . . to declare War.” The paradigm case that the framers were thinking about at the time was the kind of war when people physically gather in order to engage in a confrontation between two states. They didn’t think about the dynamic that would be presented when wars are simply terrorist acts by non-state actors. These weren’t within the scope of their paradigm case.

Or finally, think about Article 1, Section 8, Clause 8—the Progress Clause (also known as the Copyright Clause): “The Congress shall have power . . . to promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their Writings.” This clause too has come to have a paradigm case. The paradigm case as this clause is now conceived surrounds professionals. Professionals depend upon the exclusive right to control the copies and distribution of their works as part of their business model. Their business model focuses on profit, using copyright as a means to secure profit. The assumption of

copyright, according to this paradigm, is that if you don’t secure enough money to these professionals, we will get less creativity out of them.

I have nothing against professionals. But obviously, not all creators are the same in this sense. Not all creators have the same business model. So like

the paradigm of the Fourth Amendment or the paradigm of the War Powers Clause, the Copyright Clause paradigm ignores important cases. For example, it ignores amateur creators—by which I do not mean amateurish creators. I mean people who create for the love of what they create and not for the money. They

A model of copyright that is appropriate to one ecology can be a model that's harmful to another.



are creators too, and their creativity has been critical for culture in our past. Aldous Huxley wrote in 1927: "In the days before machinery men and women who wanted to amuse themselves were compelled, in their humble way, to be artists. Now they sit still and permit professionals to entertain them by the aid of machinery. It is difficult to believe that general artistic culture can flourish in this atmosphere of passivity."³

critiquing and building upon and playing with others' creativity does not have excluding at its core. Excluding others is not how that business model will succeed. The point here is simply that all creativity happens within a particular *ecology* of creativity. And these ecologies of creativity have different business models. A model of copyright that is appropriate to one ecology can be a model that's harmful to another.

About twenty years before Huxley, John Philip Sousa, speaking at the U.S. Congress about the phonograph, said: "These talking machines are going to ruin the artistic development of music in this country. When I was a boy . . . in front of every house in the summer evenings you would find young people together singing the songs of the day or the old songs. Today you hear these infernal machines going night and day." Sousa noted: "We will not have a vocal cord left. The vocal cords will be eliminated by a process of evolution, as was the tail of man when he came from the ape." Here's a professional celebrating the critical importance of the amateur to keeping culture alive and vibrant. This is his hero: "young people together singing the songs of the day or the old songs."⁴ And that's the picture—*young people together*—that he wanted to make sure copyright law didn't squelch. These amateurs too are creators. They have their own ecology, or business model, of creativity. And in their business model, exclusive rights make no sense. Their business model of sharing and

Observation #3

As a law professor, I am a little surprised by the respect that non-lawyers typically give the law. Because lawyers' view is one of constant skepticism. We constantly ask and demand of the law that it explain to us: How does this make sense? And we never presume that we happen to have a body of regulation that makes sense. We always examine. Where it does make sense, we say good for the law, and we encourage people to follow it. But where it makes no sense, our perspective is that the law needs to be changed. This is especially so in the context of copyright—especially so because of the radical changes I described in Observation #1, regarding the scope and reach of copyright law, which now is reaching in ways never intended or planned by the framers of this law. We should be especially skeptical here.

The Argument

I want to talk about the ecology of creativity in education. What does it look like? What is its business model? What is the ethos of this ecology of creativity? We all write scholarly articles, and we want others to copy and distribute them as broadly as possible. And we don't get paid when people copy. Educators' business model is distribution freely. Restrictive distribution is inconsistent with that business model. On the other hand, although textbook markets and scholarly books are certainly not the professional creativity model embodied by entertainers like Britney Spears, they also are not quite what John Philip Sousa was romanticizing. They are not written as large money-makers, but they are not created for free.

Which rights or which system of rights for education makes sense is a much more difficult question. If we make the system of rights surrounding education more like the Britney Spears professional model, then collaboration will be harder. If we make it more like the John Philip Sousa amateur model, incentives for extra types of work will be weakened. What we need, *step one*,

is a hybrid of models in the context of educational creativity—informed by the technical capacity of digital technologies.

Next, *step two*, is if that's so—if it's true that there is a diversity of business models for creativity, if there's a different ecology for creativity depending upon the domains within which we are speaking and acting—then we should expect to see a certain resistance by educators to the current regime. We should be seeing a resistance to the imperialistic approach of imposing the Britney Spears model of copyright upon the educator. We should be seeing not a rejection of copyright—that's a mistake—but, rather, an approach that skeptically examines copyright and that demands proof that this model, as applied to the worlds we know, makes sense. If you expect that, however, you will be very disappointed by what we in fact see out there in the educational community. Rather than a resistance to the demands of one model of copyright, the past twenty years have increasingly seen enormous pressure from the top to embrace this one model. The field has been captured by an idea—a paradigm, a foreign import into our domain—of creativity according to the professional copyright model, with little resistance and with too little skepticism.

Which leads to *step three*: stop it. Stop believing, stop listening, stop deferring. Feel entitled to question this system. Feel entitled to question whether copyright law as currently crafted makes sense for education. This deference to the people I produce for a living—lawyers, people who confuse the paradigm case with the universal case—is destructive to education. *Educators*, not lawyers, need to take responsibility for that destruction. Educators need to do a better job of protecting this important domain of culture.

How would educators do that? Here's the question to be asked: If there's a business model of education that depends upon sharing and resources held in common, that builds upon that

common set of resources, how does the paradigm case help that business model? For example, think about academic journals. How does the paradigm of the Britney Spears model help here? The answer differs, of course, depending upon the context. Academic journals' extraordinarily high costs, which are going through the roof faster than inflation, don't matter much to the rich American universities. But for the rest of the universities in the United States and around the world—universities that don't consider themselves to be rich—this is a significant cost. Indeed, around the world, even the nominal cost of getting access to these journals is prohibitive, blocking the spread of knowledge globally to people who could depend and build upon that knowledge if they had free and fair access to the knowledge.

Putting aside educators and universities, let's think about citizens. These costs are especially destructive for citizens. I felt this quite directly not long after my third child was born. Three days after she was born, there was a fear that she had jaundice. She fell into a severe state of lethargy, and the doctor said: "You've got to get her to the hospital." I had been doing some research, of course, becoming fearful as the doctor became increasingly concerned that she might have this extraordinarily destructive condition, which causes brain damage. I'd gone to the American Family Physician website, which permits users to download articles about scientific and medical issues for free. I downloaded an article and printed it out, and I had it in my hand as I

raced to the hospital with my three-day-old daughter.

As I'm sitting there at the hospital, waiting for my daughter to be seen by the doctors, I'm reading the article. I come to table four of the article, and I read the following: "The rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication." I thought: This is astonishing. This is not Britney Spears. This is not the crown jewel of the MGM Film Enterprise. This is a scientific journal talking about a matter of health and science. That it would already have built into its system a way to control whether

I get access to a graph—the critical graph that I need to

Feel entitled to question whether copyright law as currently crafted makes sense for education.



see in order to have some confidence about my daughter's place on this fearful scale—is extraordinary. Who would think of building and deploying such a system? Why would it have made sense?

Of course, there are plenty of important contexts where we need this kind of control. Britney's is one. There, it might make sense. But here? What are the costs here? There are significant costs. What are the benefits? Do the benefits of this system of control exceed the costs? Is the proprietary model one that makes sense here? I believe it made perfect sense in the past. Then, the economies of production of physical journals necessitated that type of control. If it was evil, then it was a necessary evil. But the thing to remember about necessary evils is that they are still evil. If we can avoid them, we should avoid them.

And that's exactly, of course, what the open-access movement in scholarly publishing is trying to do: to replicate the good of the old system—peer review of scholarship—while securing access to anybody, across the world, who wants access to this knowledge; and to avoid the evil, to avoid the restrictions on access, which make no sense to the underlying business model of scholarship, which is universal access to knowledge. That's the mission of the Public Library of Science (PLOS), on whose board I used to sit. And there are many others who are also trying to do this.

The question to be asked is whether the system makes sense. I guarantee that the people who are driving the current debate are not asking this question. Indeed, we've seen the consequence of their unthinking work before. Let me give an example.

Think about two bits

of culture, both very important to our culture. Number one is printed books. The funny thing about books is not only that we have access to every single book ever published but also that we have this access for free, through libraries, or almost for free, through used bookstores. There is an enormous market of creativity here, an ecology of creativity, that preserves access to this extraordinarily important bit of our culture unhindered by the costs of a copyright system.

Compare that with another bit of culture: film. Film is a compilation work—meaning that it's produced by having a bunch of different copyrighted works folded into it: the story, the images, the music. To use a compilation work or to reuse a compilation work is contingent upon whether one can get the permissions from the copyright holders to the component parts. For example, in the very beginning of CD-ROM technology, the people at one company, Starwave, decided that

they wanted to celebrate the career of Clint Eastwood. They wanted to produce a CD-ROM that would include 30-second clips from every film that Clint Eastwood ever made or appeared in. They had a team of lawyers who were assigned with the task of clearing the rights to include the 30-second clips on the CD-ROM. It took those lawyers one year of work to clear all the rights necessary to enable that simple compilation to be made to celebrate the work of Clint Eastwood.

Or think about a more important problem, in my view, in the context of documentaries. Charles Guggenheim, one of the most important documentarians from the twentieth century, made an extraordinary film documenting the work of Robert Kennedy. Produced two months after Kennedy's assassination, *Robert Kennedy Remembered* was shown only at the 1968 Democratic Party Convention. The documentarian's daughter, Grace Guggenheim, a filmmaker, is the curator of Charles Guggenheim's work. For the past twenty years, Grace has been engaged in a project of negotiations to secure the rights to move her father's work onto a DVD platform to make it accessible.

Why would it take so long? Because documentaries are often made up of snippets of other people's works. Filmmakers, when they made those works, took the advice of their lawyers. And their lawyers insisted on licenses that covered almost all future uses. This played out dramatically in the context of the extraordinary television documentary series *Eyes on the Prize*, an account described by one filmmaker as “virtually the only audio-visual purveyor of the history of the civil rights movement in America.”²⁵ The makers of the documentary estimated that it was going to cost up to \$500,000 to reclear the rights necessary to make the documentary accessible in DVD platform for access by future generations.

What this means is that the vast majority of documentaries from the twentieth century will literally disappear



The vast majority of documentaries from the twentieth century will literally disappear from our culture.

from our culture. Because they exist in nitrate-based stock film, they will turn to dust long before anybody works out how to get around this enormous legal thicket of rights—a task necessary simply to clear access to make it possible to preserve documentaries for future generations.

What is the difference between these two bits of culture? The difference is the regime of rights under which each was created. When each was created, both regimes were perfectly fine. But the regimes are radically different. We need to act now to avoid the thicket of rights obstructing access to films and documentaries.

What We Can Do

There are three possible things we can do in response to the copyright problem. *Number one*, we can think about changing the law. I'm sorry to report that I think this is a hopeless strategy today. If I'm right and if it is indeed hopeless to think about changing the law, then we need to move beyond that and think about what else we could be doing.

Number two, the second thing we can do is to change our norms, our practices. That was the objective of the project that a bunch of us founded in 2001: Creative Commons. The Creative Commons project has, as its ideal, identifying simple ways for authors to mark their content with the freedoms they intend their content to carry. So, rather than the "all rights reserved" copyright model of Britney Spears, this is a kind of "some rights reserved" copyright model in which the users can see more clearly the freedoms they have with the creative work and the restrictions that the creator continues to insist upon. The freedoms could be to share the work, or to remix the work, or both. The restrictions could be to use the work only for noncommercial purposes, or only if the user shares alike (giving others the freedoms inherited), or both. The creator can mix these freedoms and restrictions, resulting in six licenses, which come in three layers.

One of the layers is a human-readable

commons deed that expresses, in terms anybody should be able to understand, the freedoms and restrictions associated with that creative work. Second, and very different, is a lawyer-readable license, a billion-page document written by the very best lawyers we could find to make enforceable the freedoms associated with the content. Third—and ultimately, in my view, most important—is a machine-readable expression of the freedoms that are associated with the content, so that machines can begin to identify the freedoms that run with particular bits of content and make it easier for educators and scientists and artists to gather content on the basis of the freedoms that it carries. Yahoo and Google both have built into their search engines the ability to filter content on the basis of these freedoms.

The result is a certain kind of creativity that is, I think, the very best celebration of the kind of romantic vision that John Philip Sousa was talking about. My favorite example is a song, "My Life," written by the artist Colin Mutchler. He uploaded the guitar track to a free site that allowed other people to download it under a Creative Commons license. A seventeen-year-old violinist named Cora Beth downloaded it, added a violin track on top, renamed the song "My Life Changed," and then re-uploaded the song to the site for other people to do with as they wanted. I've seen a whole bunch of remixes of the song. The critical point is that these creators were able to create, consistent with copyright law and without any lawyer standing between them. And that's the objective: to enable people to respect the underlying rights that copyright enables them and

grants them without requiring the high cost of lawyers' intervention.

Since the launch of Creative Commons, there has been an explosion of creative objects marked with these licenses. Over 100 million images with Creative Commons licenses are on Flickr. Radiohead released a song, a number-one song on Amazon, with a Creative Commons license. Girl Talk is a big supporter. Nine Inch Nails released an album under a Creative Commons license; within the first week, they made \$1.6 million in sales of music that was also available for people to download for free. They had recognized the importance of bringing the audience upstage, and they were rewarded for that. Al Jazeera, amazingly, makes all of its videos of the Middle East available under Creative Commons licenses so that anybody can incorporate them into news shows and commentary around the world. The White House has put its content under a Creative Commons license. And in

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2009, Wikipedia relicensed the whole of Wikipedia under a Creative Commons license, to build this infrastructure of interoperable free culture that speaks to a different business model of creativity.

In 2005, we launched the Science Commons project, to focus the same kind of insight in the context of science. How do we lower the transaction costs for scientists to share their work? How do we build an infrastructure to enable voluntary sharing? We wanted to be part of the open-access movement in scholarship, and an extraordinary number of journals—approximately 1,000—now use Creative Commons licenses to make their content freely available under the terms of open-access licenses.

We also started the Open Data project, which is more complicated because data isn't technically protected, in the United States, by copyright. We wanted to build a legal infrastructure to simplify

the complexities around sharing data. That infrastructure is a protocol that we call CCO. It is basically a simple way for creators or scientists to waive any right or claim they might have to the underlying data and then to complement that legal infrastructure with a technical infrastructure that enables sharing. We have been one of the most important forces behind the RDFa standard—which, when it matures and is embedded in the infrastructure around us, will enable a much more intelligent way for these entities to share knowledge.

We've extended out of the virtual world into the physical world as well—into the open materials space—to enable stuff to be more simply shared. We have a materials transfer agreement, which is like a Creative Commons license that enables people, using the same three-layer model, to facilitate the sharing of whatever they are producing, without the

enormous costs that are typically layered on top by lawyers insisting upon control over everything in the future. The aim of this project is to simplify voluntary sharing.

One of the most dramatic examples is the Personal Genome Project. This project plans to put volunteers through an enormously rigorous test to make sure they understand what they're volunteering for. Volunteers have to get a perfect score on the online exam; if they don't get a perfect score, they can't be considered as a volunteer for the project. These volunteers agree to make their gene sequence information completely available for anybody to do whatever they want with it. Not everybody would want to opt into this, but certain important leaders in science have done so. More than 1,000 volunteers have been cleared but not yet processed. Three things will be made available: (1) complete gene

sequence for all volunteers; (2) medical information for all volunteers (they will report the whole of their medical history in a way that can be used by science); and (3) stem cells, which will be made accessible for anybody, according to a protocol. All three of these categories are made accessible under a Creative Commons type of infrastructure. The gene sequence is CC0 (no restrictions at all); the medical information is CC0 (no restrictions at all); and the stem cells are governed by a materials transfer agreement that facilitates simple sharing in a way that will explode knowledge around this gene sequence information.

Finally, in 2007 we launched ccLearn, the objective of which was to try to corral, or “herd the cats” of, the open educational resources movement in order to help build an infrastructure of interoperable, free educational resources so that the ideal of open education can become a reality.

Number three, the third thing we can do in response to the copyright problem, is to change fate. As impossible as this might sound—and I am a bit of a radical optimist about this—we have to learn from our past. I want to think here about the past in the context of the current debate surrounding what used to be called the Google Print project and is now called the Google Book Search project. This project plans to “Googleize” 18 million books. These books fall into three categories: (1) 9 percent of the books are in copyright and in print, so we know who the publisher is; (2) 16 percent of the books are in the public domain; and (3) 75 percent of the books are presumptively under copyright but are no longer in print, which means that there is no one to ask for the permission to do whatever it is that you might want to do with those works.

Google looked at this triad of cat-

egories and said, “OK, we’re first going to scan all of them, and then we’ll grant access to the underlying works differentially.” For the public domain books (16%), Google would grant full access. Users can download a PDF version of the public domain work, store it on their computers, and share the book with friends. This guarantees access to these works in an electronic form for free. For the books that are presumptively under copyright (75%), Google would grant at least “snippet” access. A search in the Google library results in snippets from the book—a couple words around the word that was searched on—so that the user knows whether the book might have something to do with the particular thing being searched for. Google then provides links so that the user can either buy a used book or get the book at a library. Third, for those books that are in copyright and that have a known

publisher (9%), Google would give as much permission as the publishers or authors would allow.

Not surprisingly, not everybody loves Google or the Google Book Search project. And of course in the United States when you don't like someone, you typically sue them. The Association of American Publishers and the Authors Guild banded together to file a lawsuit against Google, saying that Google was engaged in massive copyright infringement. They claimed that before Google could scan the 18 million books, Google needed to clear the permissions that would be required by the copyright owners if copyright still survived in any of those 18 million books. What would that mean, precisely? For the public domain books, it wouldn't matter much because there's no rights-holder to talk to; thus, 16 percent could be included in the Google library without any problem. The in-print and in-copyright books also do not pose a problem. Indeed, every one of these publishers had already, before Google launched the project, entered into agreements permitting Google to grant significant access beyond snippet access; thus, this 9 percent of books could be included. But if the claim of the Association of American Publishers and the Authors Guild were adopted as law, the remaining 75 percent of the books in the Google library would disappear, since there is no

There's an important progress in this settlement, since 20 percent of this gaping hole is better than none.



practical way to clear rights here; there is no obvious person to ask about permission, because the copyright system is an enormously inefficient property system that doesn't even tell us who owns what.

The lawsuit was settled by an agreement on October 28, 2008. The agreement says that for books in this last category (the 75% presumptively under copyright), 20 percent of the content of each book would be available to people freely as they searched the Google library—"freely" in the sense that Google was going to pay for that right but that the user could get access to it for free and then would have the right to purchase the full book. Money paid to purchase full books would go into a pool to be held by some new corporation that would give it out to the authors, assuming that they could be found someday in the future. What this settlement left open, importantly, was whether what Google did originally should be considered fair use. Google rightly, in my view, insisted that their original plan was protected by fair use and they did not give up that claim in the settlement. But the Authors Guild disagrees with that. So whether it's fair use to make the scan or snippets was held open. But the project now opens up 20 percent of each book. And obviously, 20 percent is more than snippets. In my view, there's an important progress in this settlement, since 20 percent of this gaping hole is better than none. It's more than fair use, and obviously more access is better.

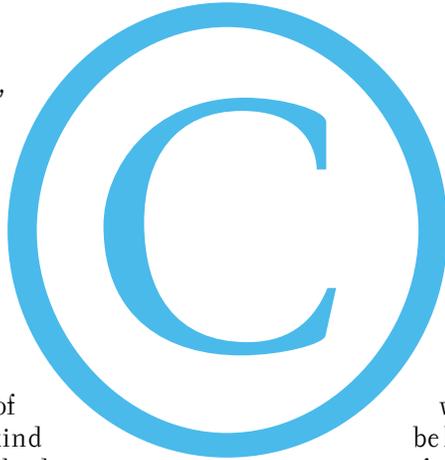
Still, this is good only statically. The fear I have is the dynamic consequence of establishing a structure like this: with the enormously large players in a relatively large oligarchy of rightsholders on the one side and a very powerful company like Google on the other. The question we need to ask is, What ecology will this structure produce for accessing our culture? The ecology of access today, of course, is the ecology of the library, which is free access to the whole book—not to 20 percent of the book and the right to buy access to more. The settlement establishes a world that is radically

different. Indeed, this 20 percent is a simplification. If you read the 140-page settlement, you'll see that there is in fact a radically complex formula, depending on the kind of work and the kind of copyright involved in the work, for determining how much access is granted for free.

My fear—a fear that was only exacerbated as I tried to learn about the disease that I thought my daughter had (and that, it turned out, she did not have)—is that this structure will push us in the direction of doing to books what we did to documentary films. It's a future not of a digital library; it's a future of a digital bookstore. Indeed, it's worse than a digital bookstore because this is a digital bookstore with all the freedom of a library of documentaries—which of course we understand now to be essentially none because of the enormous complexity created by this obsessive permission culture produced by lawyers and oligopolies oblivious to the costs that their system will produce for the future of access to knowledge and culture.

We need to wake them up to these costs. There are insanely hard questions here—not just the competition and privacy questions that get raised by the Google Book Search settlement, but questions around the ecology of access that this settlement begins to cement. We need to wake people up to the fact that there is a need to restrike a balance in copyright between preserving access to our culture without destroying the incentives that certain parts of that culture need to produce great new works—between protecting access to the past without protecting the past against the future.

And we need to begin that conversation with humility. None of us know precisely how this should be done. We in the educational community love to focus



on the limits of private companies, the limits of the government, the limits of the oligopolies, but am I the only academic who is also fearful of the limits of academics in understanding what this future should be like? Am I the only one terrified about a set of rules—written by us—that would define what the future should be like? We need to recognize that *both* sides have limits, and we need to see this settlement as an important experiment. As Peter Drucker wrote, “There is nothing so useless as doing efficiently that which should not be done at all.”

Conclusion

The existing system of copyright cannot work in the digital age. Either we will force our kids to stop creating, or they will force on us a revolution. Both options, in my view, are not acceptable. There is a growing copyright abolitionist movement—people who believe that copyright was a good idea for a time long gone and that we need to eliminate it and move on in a world where there is no copyright. I am against abolitionism. I believe copyright is an essential part of the cultural industries and will be essential in the digital age—even though I also believe it needs to be radically changed in all sorts of important ways and doesn't apply the same in science and in education. Copyright is essential to a diverse and rich (in all senses of that word) culture.

We are in the middle of a war. My friend the late Jack Valenti used to refer to this as his own “terrorist war,” where the terrorists are our children. We organize and wage war against these terrorists, these pirates. The thing that we—as educators, as scientists, as parents, as people who understand the potential and uses of this technology—need to recognize is that we can't kill this tech-

nology. We can only criminalize it. We're not going to stop our kids from creating the way they create. We will only drive that creativity underground.

We need to ask ourselves: Is that any good? Our kids live in this age of prohibitions. In all sorts of contexts, they live life against the law. We tell them they live life against the law, and they recognize that their behavior is against the law. That recognition is extraordinarily corrosive, extraordinarily corruptive of the rule of law in a democracy. All of us have let this insanity happen. All of us can, if we actually stand up and do something about it, make it stop. ■

Notes

1. Jessica Litman, “The Exclusive Right to Read,” *Cardozo Arts and Entertainment Law Journal*, vol. 13, no. 1 (1994), p. 34.
2. *Ibid.*, pp. 34–35.
3. Aldous Huxley, “The Outlook for American Culture: Some Reflections in a Machine Age,” *Harper's Magazine*, August 1927.
4. See also John Philip Sousa, “The Menace of Mechanical Music,” *Appleton's Magazine*, vol. 8 (July–December 1906).
5. “Eyes Back on the Prize,” *Filmmaker* blog, August 29, 2005.

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For a video and an audio podcast of this keynote address, as well as the presentation slides, see <<http://www.educause.edu/Resources/Lessig2009>>.



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