

Chapter 9

Copyright Law, Intellectual Property Policy and Academic Culture

[from "The Center for Intellectual Property Handbook," Kimberly M. Bonner and the staff of the Center for Intellectual Property, eds.]

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Introduction

This paper, which is based in large part on a keynote address delivered at the University of Maryland University College Symposium *Pirates, Thieves and Innocents* on June 16, 2005, and which retains some of the informal nature of that address, examines the interplay between copyright law and academic values. While it identifies a number of areas in which copyright law as currently shaped presents serious barriers to academic inquiry and the research and teaching missions of our universities, the paper also focuses on policy *choices* that the academic community makes about various rights that are granted under copyright and the very significant ways in which these choices can influence, facilitate or impede the academic mission within the existing framework. The academy is not simply a victim of current copyright laws and their consequences, however convenient and comforting it may be to fall into that role, and I argue here that it needs to do much more than simply advocate for legislative change and relief; universities can and must take a key leadership role in helping to alleviate many — though certainly not all — of the problems that the current copyright law creates for scholarship by making explicit policy choices that are consistent with fundamental academic values, and they can lead (and, hopefully, help to shape) the broader public thinking about these issues by their example. Some of these choices are difficult, in that they involve renouncing the possibility of enjoying certain (usually in reality nominal) revenue streams in favor of remaining true to fundamental mission imperatives. In this sense, the paper offers an agenda for reflection and self-examination by institutional communities within higher education about intellectual property policy choices and their relationship to fundamental academic values.

This paper is intended as a survey; it covers a great deal of ground at a high level and does not delve exhaustively into the details of any particular topic. It's intended to offer a framework and a sampling of the kinds of questions that need to be raised within the context of that

framework. I hope that it will be useful as a starting point for community discussions in a variety of settings.

Finally, I need to include here the disclaimer that I am not an attorney, and nothing here is intended as legal advice.

The Practice of Scholarship: Building Upon Evidence and the Prior Scholarly Record

The most fundamental part of research, teaching, and scholarly discourse is the ability to *build upon* both evidence and prior scholarship. This word, “build,” is very important. It’s chosen to underscore the need not just for access to evidence and prior scholarship, but the ability to effectively integrate and re-integrate these materials into the ongoing fabric of scholarly discourse. Access to these materials is certainly a necessary prerequisite to the scholarly enterprise, but it is not sufficient. It’s important to differentiate the twin problems of building upon prior scholarship and building upon evidence broadly in scholarly inquiry and discourse; while copyright law is a common denominator, the functional frameworks for the control and use of these two classes of material are quite different.

The scholarly process of building-upon goes beyond access; it’s about the ability to quote; it’s about the ability to analyze, to paraphrase, to talk about, to critique, to point other people to things, to cite sources and make attributions (which is a very important and much overlooked capability); to say, “if you look at this document that I give you a reference to then ten years later you can find it and have some confidence that you are looking at the same document that I discussed in my work” (that is, to have an expectation of effective and responsible stewardship of the scholarly and broader cultural record). All of those things are fairly fundamental traditional parts of scholarly and academic practice and culture. Let me suggest, though, that the idea of building upon is getting much richer in the new digital world. Consider all of the activities I’ve just described, not just in the traditional context of texts, but in the context of movies, software, images, and interactive web sites.

Recently, Professor Larry Lessig of Stanford University has been giving a wonderful talk on “remix culture,” as he calls it — the idea of reusing, repurposing both scholarly and (perhaps, in his view most importantly) popular culture materials in order to construct new arguments, new creative or scholarly works; his examples draw strongly on the practices that are familiar and compelling to the current generation of students,

and on multimedia content that underpins these practices. Clearly, video, music, and imagery completely redefine our ideas about quotation, reuse and building-upon.

There's another issue, much less discussed, which I think is going to become crucial in the next decade in terms of building-upon. And that's the notion that literature, corpora of literature, corpora of evidence, aren't just things that are engaged by, read by, humans. They are resources that we *compute* on. They are resources that people want to manipulate through algorithms and computational agents. Part of this is the growing emphasis on the rapidly developing technologies of "data mining" and "text mining." These technologies are being applied to all kinds of textual databases very aggressively, fueled by heavy government investment, both in the United States and elsewhere. And the idea of text mining something like the biomedical literature, trying to extract leads and hypotheses that point the way towards planning new scientific investigations is actually becoming quite commonplace. The biomedical literature is a particularly rich source because of the amount of work that has been done on terminology, ontologies, and other kinds of knowledge superstructure; the fact that many papers have a sort of a standard template to them that facilitates algorithmic analysis; and because often the same thing is referred to in different ways in different sectors of the literature. The literature of biomedicine is vast, sprawling, and rapidly growing, yet results in one sub-specialty represented in this literature may have significance for another, quite distinct, sub-specialty — if only the connection can be made.

The computational analysis of massive corpora within the scholarly record (and indeed, in the broader body of evidence) will, I think, become very crucial to scholarship and research in the next few years. It is worth noting that a number of significant projects are already underway, as I indicated, both in the United States and abroad, and these projects are starting to explore these kinds of activities in serious ways. The life sciences, and also intelligence analysis, and public relations and business competitive intelligence in the commercial sphere, are leading the way. It seems likely that other scientific fields, particularly emerging, interdisciplinary ones like nanotechnology, will also be fruitful, but one can easily imagine these techniques extending rapidly into the social sciences and humanities as appropriate corpora of material become available to support computational analysis; the Perseus project, at Tufts University, is already beginning to explore applications in the humanities, for example.

We need to enable and protect the ability to build-upon, in this very broad sense, for both the scholarly record and for the broader cultural record, if teaching, learning and research are to continue to flourish.

The essence of scholarly work is building upon the scholarship that has come before: extending it, elucidating it, and critiquing it in an explicit fashion. This is so fundamental that failure to do so properly is recognized in the inherently academic crime of plagiarism, which is related to copyright infringement but goes far beyond the strictly legal questions of infringement to a deeper academic cultural value. With regard to building upon the scholarly record, let me simply state at this point that, to a first approximation, the academy controls the scholarly record: it creates it, it represents the primary market for this record, and despite concerns about the current behaviors of scholarly publishers, at a very fundamental and long-term level, the rules surrounding the disposition and use of the scholarly record can, must, and will be under the control of the academy — though it must exercise the will to reassert this control in some very critical areas — and, ultimately, I believe that the values and practices surrounding the use of this scholarly record will be congruent with academic missions and values. This is a problem of values, of policy, and of will. It is not in essence a legal problem (other than to the extent that overcoming some past policy mistakes is made much more difficult by the legal impediments to undoing these choices). I will have more to say about this later.

The second body of material with which we need to build upon in order to conduct academic inquiry, teaching and learning, and scholarship is what I would call *evidence*. Evidence includes data about the world in which we live, observational data — what has been the weather in various places on the globe for the past few hundred years, genetic sequences, species distribution, astronomical observations, all of the richness of observational science. It also involves the record of human thought, human culture, of societal action, of political choice, of history, all of the things we loosely refer to as the cultural record of our own society and of other societies, of other places and other times. Note that the boundaries between the scholarly record and the broader body of evidence are not always crisp and clear, particularly with regard to cultural materials. Both of those, the observational and the cultural, form a body of evidence that needs to be brought into play to support inquiry, to support teaching and research. It has got to be accessible. It's got to be there to build upon. Some of this evidence is created by the academy; some is part of the broad, public, cultural heritage (and technically in the public domain); much of it is created outside of the academy — popular works of entertainment, the records of commerce and government, news, and a vast array of other materials. Here the overall legal framework that governs intellectual property in our culture is critical in dictating the ability to preserve, obtain access to, and build upon a substantial part of the body of evidence. Policy choices by the academy are important here,

but only control the properties of a modest part of this overall body of evidence.

Legal Barriers to Future Scholarship: Copyright and Beyond

Copyright and related intellectual property regimes are increasingly recognized as major barriers to teaching, learning and research — especially in the new world of multimedia content, digital scholarship, and extended views of ‘building-upon’ that I have just described. Over the past 18 months I have been serving as an advisor to a commission that was established by the American Council of Learned Societies (ACLS), with some funding from the Andrew W. Mellon Foundation. This commission is looking at the so-called cyberinfrastructure in the humanities and social sciences. Fundamentally, the commission is exploring the issues involved in advancing and facilitating a set of emerging scholarly practices in the humanities that make much greater use of digital content and advanced information technology. The commission has held hearings all over the country. They have heard and gathered testimony from humanists, from social scientists, from librarians and museum curators, and from the media industries. This testimony is available on the ACLS web site (www.acls.org).

One message that is coming through very clearly, when you look at that body of testimony gathered by the ACLS commission, is that copyright is probably one of the most serious impediments to doing work in the digital humanities and allied social sciences. It’s really quite striking how widespread this view is. What’s the problem? The problem is that you can’t get rights to things. You can’t find out who to ask for rights for things. When you can find them and can get them, they are often enormously expensive or they come with such complex restrictions that it’s very hard to do anything with the material. And often, as a scholar, you simply cannot obtain rights at all; even if the rights holders can be identified, they are under no obligation to grant rights, or indeed even to *respond* to your request for permission. I will address this issue further shortly, but I want to recognize here that copyright, narrowly, is not the only problem: issues involved with privacy, with rights to likeness, and similar legal regimes, some of which operate inconsistently from state to state in the US rather than being defined entirely in uniform federal legislation in the way copyright law is primarily defined. Institutional review boards, as they extend their purview from traditional areas like medical clinical trials into foreign territories they claim dominion over because of the involvement of human subjects, such as surveys in the social sciences or the collection of oral histories, are also erecting new barriers.

In the sciences, the National Academies have published a landmark series of studies over the past decade, including *Bits of Power* and *The Digital Dilemma*, which map out the issues with scientific access to evidence and the scholarly record, and the re-use of these materials. Here, again, the barriers to science go beyond copyright.

If you look, for example, at some of the noxious provisions in the Digital Millennium Copyright Act (DMCA), you will see that fundamentally they are not about copyright, they are about establishing some sort of new legal sanctity for digital rights management (DRM) technology irrelevant to the use to which it is being put. Under the DMCA, you can protect uncopyrighted material through technical means, and it's a crime to attempt to circumvent these technical protections. The DMCA has also been used to chill, or attempt to chill, research in numerous areas.

We have, in the US at least, managed up to now to avoid enacting the various database legislation proposals that have repeatedly surfaced in Congress. These proposals would establish new intellectual property rights over compilations of facts, which are not covered under copyright. Some other nations have not been so lucky; consider the notorious European Community database directive and its implementation in various national laws within Europe. These database protection proposals are particularly dangerous in that they provide new ways to privatize and lock up the collections of evidence upon which science, and indeed scholarship, broadly rely (to say nothing of their broader implications for society).

Unlike copyright, these new intellectual property regimes and proposed regimes are so damaging precisely because they are so unbalanced; they lack the safeguards such as the fair use provisions within copyright law. While these are not my primary focus here, it is important to identify them as critical issues for the academy, and to underscore the importance of the academy speaking out publicly about the threats that they represent to academic missions and values.

I will simply note here that patents are a problem all their own, particularly with the emergence of software and business process patents, and the growing capability to use patents to interfere with what would traditionally be thought of as speech and expression in a world where these things are embodied in multimedia, in interactive presentations, and in software. Patents also shift liability and responsibility in ways that are bizarre when approached from a copyright-oriented tradition: you cannot infringe under copyright (or plagiarize) a work *that you have never seen*, yet under patent law you can be guilty of simply failing to realize that you

are re-inventing something that someone else filed a patent on rather than being the first to invent it. But I will not focus on patents further here.

Copyrighted Materials: The Central Role of Fair Use in Academic Culture and Scholarship

Fair use is a defense against copyright infringement that allows the use of copyrighted materials for certain specific purposes, such as scholarship, criticism, teaching, and parody, under certain specific conditions. The decision about whether fair use applies in a given situation depends on a complex and somewhat subjective calculus of factors.

Fair use is one of the most vital underpinnings of our ability to do scholarship and to do research — it allows the use of copyrighted materials without the need to ask permission, or to pay to obtain such permissions, if they are available under commercial terms. Fair use has recently come under a great deal of pressure from various directions. It has come under pressure in the sense that various rights-holder groups are interpreting fair use very narrowly, suggesting that various activities (some of which are very traditional parts of scholarly practice) are not fair use and aggressively attempting to advance their position by threatening individuals and institutions with lawsuits. Indeed, some rights holders would argue that fair use is an archaic legal doctrine that has no real place, particularly in a digital world.

Fair use also faces threats because it is sometimes misused within the academy, where we find a very strange set of perceptions around fair use. On the one hand, you run into academics who have, shall we say, a naïve notion of fair use; you can find anecdotal evidence of a reasonably widely-held mythology that characterizes fair use in these terms: “I’m an academic. That means that any use I make it is fair.” And that is simply not true.

But, on the other hand, we have some dynamics in the legal precedents around fair use that basically are saying, “use it or lose it,” and we are not really using it enough — we are not actively and proudly pushing those uses that are, in my view, clearly within the purview of fair use, in the academy. We are not defending our rights vigorously enough. We are in a world where academics are being strongly encouraged by a risk-averse organizational culture to use material *only* when permissions have been explicitly obtained and, where necessary, paid for, rather than living with the uncertainty of being prepared to legitimately argue a fair use defense against a charge of copyright infringement.

The most basic example of this problem: 30 or 40 years ago someone might reuse, for an example in a scholarly work, a paragraph or two, a stanza, a verse, or something out of some other copyrighted work (attributed appropriately) and not worry about it too much. The author (with the concurrence of his or her publisher) would take the position that, in all reasonable judgment, this reuse, this quotation, is fair use. (Of course, the only way to *prove* this was correct was to be sued, and to win the court case.) Somewhere along the line, the practice grew up of writing away for permissions to quote, and then, even beyond the writing away for permissions, having the rights holder say, "Well, we'll charge you a hundred dollars for that permission," and the author agreeing to pay that price. In an ever more litigious world, it was better to pay for certainty than to accept the risk of being challenged. So now we have this whole traffic in permissions and permission payments for uses which, at least to my innocent eyes, look like they fall pretty squarely under fair use. One of the dangers here, of course, is that, if you look at the factors that are considered into deciding whether something is fair use, one of them is about economic impact of the use. If we were back about 30 or 40 years ago, when there was no market in paying for these kind of small quotations, there obviously wasn't much of an economic impact. Now, for better or worse, we've created a market, a documentable revenue stream, which raises the specter of rights holders being able to argue that payment is customary and expected, and what was once a fair use is now having a real negative economic impact on the rights holder.

This move towards a complete permissions-based culture of scholarship is an abomination for many reasons. It represents a huge burden and tax on the productivity and intellectual life of scholars, who are being required to clear permissions both to protect themselves, and as a condition of publication. It chills scholarship by causing scholars to avoid certain topics because they cannot clear permissions (and the issues here are not just economic; permission to quote from a work may not be granted for an analysis that is critical of that work, for example). The drafting of agreements and the exchange of large numbers of small payments create a great deal of overhead and friction in the system of scholarly discourse to little real economic gain. And, of course, it makes a travesty of the fundamental constitutional basis of copyright law in advancing the growth of knowledge.

I think we also need to recognize another aspect of fair use and why the ability to invoke fair use is going to be in the future. If you consider the sort of text-dominated culture, which has characterized most scholarship for centuries, you will realize that for texts, if you can read a text you can probably make a copy of a portion of that text that's good enough to use

as evidence in scholarly discourse — you can read and transcribe by hand if you have to. This is within the capabilities of almost anybody. Virtually any author can do this, and scholars do all the time. You don't *need* to be able to cut and paste; that's just a convenience, an amenity. So, in some sense, being able to read something, being able to view it, which, after all, you have to be able to do if textual material is to be available in any meaningful way, opens up the door for readers to make choices about re-use under fair use; it doesn't make much sense to have content that's locked up so people can't even see it. They certainly won't pay for it if they can't get any access to it.

But moving beyond text, we see the situation is very different for images. It surely is not the case for music that listening implies the ability to quote. It surely is not the case with something like a movie that viewing means you can share what you see with others. Very few of us are good enough as artists that we can look at a picture and draw a copy of it without applying a technological aid like a camera that you can ban. Very few of us can really reproduce accurately a bit of a musical performance well enough to talk about it, to share a little segment of it with other people. "Quoting" briefly from a film—taking a little clip out of a movie in order to study or critique it — is not likely to be something you can do by transcription with pencil or paper or by transcribing using your keyboard, so the ability to make fair use in a sense of actually taking bits of multimedia works is very crucial, much more crucial and with a very different character than what has come before in the text-oriented world. For multimedia, technical barriers to reuse constitute real barriers to the choice to invoke fair use. So, that is one of the reasons that I think it is especially important that we nurture fair use, going forward.

A final point: much more is published today, in the sense that it is globally visible through the internet and the worldwide web. While challenges to the fair use of material in scholarly work was once limited to the fairly small segment of scholarship that was formally published in monographs and journals, now theses, dissertations, term papers, class projects, course materials and a vast array of other works that are available on the Internet in digital form are all subject to scrutiny and challenge by rights-holders. So the need for fair use is greater than ever, and questions about permission practices are real, not just in the relatively rare case of the works of "published" scholars, but arise for students as well as faculty in an enormous number of settings. Indeed, we have seen the emergence of computational "trolls" that use search engines to scan the web for documents that quote from copyrighted works or use trademarked phrases and then send frightening letters to the authors of these materials demanding license fees or threatening litigation.

We seem to have a disturbingly well-developed culture in our universities that is very risk-averse about these issues. I don't know quite where it came from, but it's clear when you listen to general counsels that many of them really are taking a very risk-averse position about the issues having to do with copyright and fair use. I'd invite you to explore, in particular, some of the thinking from James Boyle of Duke University, who is especially articulate, passionate, and clear on the endangered state of fair use in the academy. The argument is that fair use is one of the underpinnings of free speech and free inquiry and that if there are any touchstone academic values, they are around free speech and free inquiry. These values are important enough that our universities have, over the years, stepped up and come to their defense in other contexts. Boyle makes the compelling argument that one of the things we need to do is help university general counsels to understand the connections here, and why it is important to take principled stances rather than expedient risk-reducing stances about fair use. This is about academic freedom and free speech.

While we certainly need to work to prevent legal diminution of our fair use rights through new legislation or shifting norms, the academy's rights under current copyright fair use provisions are very powerful. But we must make the policy choices to stand up for them.

The Importance of the Public Domain and the Orphan Works Problem

The public domain is a crucial component of the ability to do scholarship. Materials in the public domain are clearly unencumbered and allow the most transformative re-use and building-upon. A large, healthy, vibrant, and continually growing body of public domain works will fuel scholarship, teaching and learning.

I think that one problem that has been observed over and over again about much of the intellectual property legislation activity is that there is a well-organized, wealthy commercial sector that clearly benefits from the extension of the term and scope of copyright and the limitation of exemptions to their rights under copyright. This is a profit stream to them; the more extensive the protection they can get for their properties, the greater and longer-lived the revenue stream will be. So it's clear that plenty of organized groups prepared to speak up in favor of copyright enlargement, in whatever dimensions of time and practice that you want to consider that extension. Who advocates for the interests of the general public, of the consumer, of the cultural memory sector? Fewer people and organizations and a lot less money are speaking up for

the public interest and the public domain, which is so vital in supporting and nurturing the values of scholarship and teaching. Higher education and the cultural memory sector almost by default bear a great deal of this responsibility for advocacy, particularly through institutions like the research libraries. We need to make cogent and compelling — indeed passionate — arguments for the importance of scholarship and the facilitation of scholarship, and I think that one of the things that we need to recognize, perhaps unfortunately but certainly realistically, is that a lot of what has happened in the past decade or so has been about maximizing profit for a miniscule number of works. The higher education, library and cultural memory sectors have taken a stand opposing this on principle, and lost, rather than being pragmatic about what seems politically possible. Legislation extending the protection of these few works — and everything else — has carried the day. The collateral damage from that has been horrific.

There is no question in my mind that the greatest copyright legislation disaster, in terms of its impact on the general public and on the academy in particular, has been the Sonny Bono Copyright Extension Act. This law extended copyright terms for decades — both prospectively for new works, and also (nonsensically, as I will explain shortly) on a retrospective basis for existing works. It effectively halted the growth of the public domain for two decades. And many people are now expecting that it represents the first step on what will effectively be perpetual copyright, dolled out a few decades at a time — a first step in what will be a cynical legislative circumvention of the constitutional principles underpinning copyright.

The motivation for the Bono Copyright Extension Act, as best as I can determine, was a relatively small number of enormously valuable and profitable properties that were in danger of coming out of copyright protection and entering the public domain — notably, certain works belonging to the Walt Disney Corporation, among others. These corporations felt that the loss of these revenue streams would be intolerable, so they went to Congress and sought relief. Now, the unfortunate thing about this situation is that we are talking about a relative handful of works. If Congress had simply said, “Send us a list of these profitable works and we will pass a special bill for you that entitles you to continue raking in the profits of those works for another twenty years,” that would have been, in my view, a disturbing capitulation to these corporations and a poor public policy choice, but what Congress actually did was infinitely worse. What Congress did instead was to extend copyright on *everything currently under copyright and all newly created works* for another twenty years. The retrospective component is particularly difficult to rationalize as anything other than a hand-out: if

one proceeds from the constitutional basis that copyright is a limited term monopoly intended to incentivize creators to produce works and make them available to the public, then clearly retrospective term extension is not going to incentivize creators, particularly dead ones. But the effect of the extension act is that all of the out-of-print books, all of the old photographs, films, bits of music, works that are of some interest to scholars, works that, as they enter the public domain, can be reused and remixed and can foster activities to further scholarship and creativity — all of this got locked up for another twenty years.

Over the past year, Marybeth Peters, the United States Registrar of Copyrights, has called for and received many hundreds of comments on the problem of what she has termed *orphaned works*. We are still struggling for a precise definition of orphaned works, but fundamentally the idea is that these are works — perhaps a book, perhaps a piece of music, perhaps a photograph or a film — that are relatively old, of no real commercial interest, but still under copyright. Typically, for an orphan work you cannot find, or often even identify, the copyright holder. New copies of the work have long since vanished from the commercial marketplace. Just think about a book that is 50 years out of print; in order to determine who holds the rights, you would have to first find the contract between author and publisher, determine whether the rights reverted to the author or are still held by the publisher, and then, who currently has ownership of those rights — it might be a successor corporation to the publisher, or it might be one of the heirs of the author if he or she is no longer alive. This is a formidable, and prohibitively costly, investigative challenge. Matters are even worse for photographs and films.

The issue that the Copyright Office is trying to grapple with is this: Can we come up with some kind of rational system of allowing the society as a whole, and, specifically, our scholarly and cultural memory organizations, but probably not exclusively those organizations, to be able to reuse, re-disseminate and preserve this kind of material in some kind of economically rational way. I urge you to look at the copyright office web site for some of the comments and discussion on this issue: <http://www.copyright.gov/orphan/>. Now, this is enormously important to those of us concerned with scholarship, teaching, and learning, because so much of this is essential scholarship and essential evidence for future scholarship. The hope is that if it is done right, an orphan works provision will not be terribly controversial. This will be a way of dealing with at least a large number of the works that are not generating any money.

One of the most obvious imperatives for the academy is continuing to speak up on a policy basis about the impact of legislation that has passed, and the impact of new legislation under consideration. An enormous coalition of higher education institutions and the societies that serve and support them, ranging from the Association of American Universities (AAU), to the Association of Research Libraries, EDUCAUSE, and many, many others, has been active in those policy debates for the last decades. They need the support of their member institutions and they need their member institutions to continue to work with them on these issues. Of all the many and diverse issues currently on the agenda, I believe that orphan works may be one of the most important. And it may be an area where there is a real possibility of positive progress in the sense that it does not directly set the academy into conflict with very wealthy, politically powerful rights holder interests.

The Mission of the University as a Central Determinant of Policy Choices

There is a very interesting debate that is quietly brewing about the mission of higher education. If you ask people, “What’s the mission of your university?” “What’s the mission of the academy?” They will usually come out with the time-honored trinity of teaching and learning, research, and public service; sometimes they will use a term such as “public engagement,” which is somewhat stronger and more aggressive than public service. Those are the classic missions that are invoked for higher education. But do research and teaching and learning, the creation and transfer of knowledge, as fundamental mission components, imply a mission that also encompasses the *dissemination and preservation of scholarship*?

I am aware of several European universities now that are stating quite openly and clearly that they believe that their institutional mission includes, explicitly, the dissemination and preservation of knowledge. In the United States, I hear answers that are certainly more varied, and, at least sometimes, much more equivocal; public institutions, as a gross generality, seem more comfortable with this formulation of mission than some private institutions, though one can also point to certain private institutions such as MIT that have taken a great deal of leadership in this area. While some institutions would point to their investments in network-based dissemination of content, to their institutional repositories, to their research libraries, university presses, and university museums as part of their commitment to the preservation and dissemination of scholarship and its underlying base of evidence, others speak about the role of the university in technology transfer, in monetizing discovery, in using the apparatus of scholarly publishing as a

way of dissemination (and complaining that they are paying too much to use this apparatus, or not getting enough return from it).

I also want to make one further note here, which is important in shaping the public policies that universities may chose to advocate: the extent to which the mission of universities, primarily embodied in their embedded cultural memory institutions — research libraries, archives, museums, and perhaps public broadcasting units — encompasses not only the dissemination and preservation of the scholarly record, but also, more broadly, the stewardship and preservation of the overall cultural record as essential evidence to support future scholarship. This is a mission that is typically shared with other, non-university-based cultural memory organizations, most notably public and private museums and national libraries and archives, to some extent through scholarly societies, and scientific and scholarly data archives funded on a national basis through governmental science and scholarly research funding bodies operating at a national and international level; the distribution of responsibility varies greatly from one nation to another, but at least in the United States, as I read the trends, a good deal of the responsibility for these activities is going to fall to higher education institutions by default. To the extent that universities honor and embrace this as part of their fundamental mission, it will certainly shape their advocacy of public policy changes and their intuitional investment strategies.

I think the time has come for every academic institution to revisit and consider thoughtfully these questions of mission. It is perhaps *the* most fundamental policy choice that a university can make with regard to institutional mission as it relates to scholarly communication and the practice of scholarship. Institutions must be very clear about their positions here, as this will provide a foundation for making a whole series of much more practical choices about policies and culture regarding the scholarly and cultural record. It also provides a foundation of principles for advocacy about legal and public policy issues. Universities and members of the academic community are increasingly vulnerable in their advocacy when they try to simultaneously argue that they should be able to maximize profit streams for intellectual property that they produce and simultaneously, because of the social importance of their missions, they should have special privileges in the ways that they can make use of the intellectual properties of others. The time has come to openly confront and explore the contradictions and compromises implicit in these positions.

Setting The Academy's House In Order: Policy Choices and Academic Values

In the remainder of this paper I want to turn to strategies which are not so much outward looking and engaged with law and public policy, but inward looking and deal with policy and culture at individual academic institutions and across the academy as a whole. Here, unlike the world of legislation and public policy, which sets the ground rules for the broader society, we find a constrained and protected sphere within which universities can largely make their own choices and control their own destinies, if they have the will, if they have the energy and the commitment to build consensus within this sphere. Law and public policy defines the existence of rights and ownership of these rights, but the choices about how to dispose of these rights, about when to choose to enforce them, are part of academic policy and culture. Appropriate policy choices are critical in shaping the future of academic culture and the enterprise of scholarship.

Faculty works

One of the most fundamental questions in shaping tomorrow's academic culture is the way that faculty think about their own work. It's a commonplace observation that faculty exist in a conflicted, schizophrenic situation where they want to act as aggressive and omnivorous consumers of the works of others, yet at the same time want to exercise tight control over their own works. We are seeing a very healthy debate about this contradiction and conflict.

This discussion began in a series of issues raised by the library community about the unsustainable economics of the scholarly publishing system, and particularly scientific, technical and medical journals; the Association of Research Libraries played a central role in documenting and publicizing these developments. At first, in response to these developments, faculty were encouraged to retain more of their rights to their own works rather than signing them over wholesale to journal publishers. But more recently, the open access movement, developments like Open Courseware at MIT (and later elsewhere) and the Creative Commons program have reshaped the landscape of discourse — the focus now is more about making scholarship *public* under modest constraints, such as appropriate attribution and limitations on commercial re-use without permission.

Today we have reached a watershed where faculty are beginning to explicitly consider the way in which their work — be it journal articles, monographs, or instructional materials — is being made available to the academic community and the broader public. Institutional and disciplinary norms are being re-established around questions like these:

- Should faculty work be freely available (with appropriate attribution) for reuse in teaching and research?
- Should there be an obligation to deposit copies of faculty work in institutional or disciplinary repositories to enable public access?
- Should faculty work be published in open-access venues?
- Is the objective of publication commercial gain or outreach to the largest possible audience?

These are questions that people are thinking about now, and talking about now. I think we need to nurture that change in academic culture, and we need to ensure it reaches not just into faculty discussions, but also into questions that students think about and will ultimately take beyond the walls of the university into other segments of their lives. I think that those culture shifts are absolutely critical and I think that the set of issues, not just about respect for intellectual property rights, but about making explicit choices about what one does with one's own intellectual property are among the most critical academic cultural values and questions that we can frame today. It is enormously exciting to see faculty coming together and engaging these issues and, indeed, passing resolutions in the academic senates of our higher education institutions, which really are resolutions about the kind of cultural and academic values they want to see on the campuses. We see this, not just in scholarly work, but also in teaching.

I have not explicitly discussed student works here; the situation surrounding these works is more complex because current policy about the ownership and rights to use the works is often poorly defined at our higher education institutions, in comparison to the status of faculty work. Also, one can think of faculty work in the context of an employment relationship with the institution; linking expectations about student works to conditions of enrollment or graduation involves more complex issues. But the way in which student works are treated by their authors, the way in which they are made available for sharing and for building-upon, needs to be part of any comprehensive debate about the shaping of a campus culture for the coming century. Students will surely be strongly influenced by the examples set by the faculty.

The Role and Behavior of University Presses

University presses are organizations that scholars, and particularly scholars in the humanities, will claim to play an absolutely crucial role in the system of scholarly communication. Their traditional mission, the reason that they were established, is to create a vehicle for the publication of scholarly works that would not otherwise be published because they aren't commercially viable. ("Commercially viable" is a tricky

term here — it might range from works not providing as good a return on investment as other works that a purely commercial publisher might chose to publish, and hence yield a smaller profit margin, all the way through works that will definitively lose money and thus can only be published if they are subsidized outright.)

University presses are organizations which, frankly, have suffered from contradictory signals over the past few decades. The host universities alternate between complaining that the presses are running deficits and exhorting them to run more like commercial businesses on one hand, and complaining that the presses are publishing overly commercial and popular-market works rather than specialized, small-market scholarly materials mandated by their missions. The presses have also suffered from criticism that they are not doing enough to move into the digital world, that they are becoming increasingly irrelevant, that they are not keeping up with commercial competitors in the scholarly publishing marketplace, while at the same time they have been denied access to sources of capitol that would allow them to make investments to facilitate the movement into digital products.

I have a lot of sympathy for university presses and the abuse they are taking, but I also think that we need to decide whether these presses are going to be instruments of university missions and university policies, or if we are going to spin them off as commercial operations. Right now a number of them are behaving, in my view, in ways that are indistinguishable from commercial entities. They are busy, for example, making life miserable for scholars by indulging in the permissions culture and chasing after the small amounts of money they can capture through charging for these permissions. They are not doing all that they can to maximize access to scholarship, and to ensure the preservation of the part of the scholarly record they have helped to create.

One might reasonably think that a university press, behaving in a way that is consistent with the overall values and mission of the academy, would very seriously think about making and putting into effect the same kind of policies that we see some of our scholarly societies making and reflecting in the copyright statements on every publication that state: “This may be freely reproduced for classroom teaching in non-profit settings or for other non-commercial scholarly work. Feel free to quote reasonable amounts from this for other scholarly work as long as your publisher extends the same courtesy to our authors.” We need to, I think, be setting an example in these areas, not having a race to see who can behave most badly.

Most recently, we saw a group of four universities — Oxford, Harvard, the University of Michigan, and Stanford University (along with the New York Public Library) — enter into agreements with Google to digitize part or all of their library collections. We do not have access to all the details of these agreements, except for the one at the University of Michigan, but based on accounts by the leadership of these libraries, and public statements by these institutions, these agreements with Google are clearly and thoughtfully designed to further the agenda of building up digital resources that will be shared by the participating universities. Among the first to protest these agreements and threaten legal challenges was the American Association of University Presses. All four of the higher education institutions participating in the Google program have major university presses. This is a stunning example of the kinds of policy disconnects that we currently face between university presses and their host universities, and it underscores the need to resolve the role of university presses within the academy.

Scholarly Societies

Scholarly and professional societies provide another important case study of the need to either take responsibility for the policies of organizations that might reasonably be considered to be instrumentalities of the academy and to ensure that these policies are consistent with the overall goals of the academy, or to reposition and reconceptualize these organizations as outside the sphere of the academy — to treat them as something akin to commercial players in the overall scholarly publishing system. Again, part of the question here is whether to take continued responsibility for the support and financial health of these scholarly societies as part of the price of demanding and ensuring policy congruence.

Once again, as with university presses, there is enormous diversity. There are scholarly societies that have shown truly visionary leadership in not just what can be done with digital technology, but in supporting and ensuring that their material is readily available for teaching and research purposes. There are others, though, that, frankly, seem to be behaving, much more like commercial publishers. To cite just one recent example, we have the spectacle of the American Chemical Society opposing the development of a public access database (PubChem) by the U.S. National Institutes of Health, which seems clearly to support the interests of researchers. We also have several scholarly societies taking the position that publicly accessible electronic theses and dissertations produced at our universities represent prior publication and thus disqualify the authors of these theses and dissertations from publishing their research in the

journals of the societies in question. These are serious policy disconnects which raise questions about the extent to which the academy should support the societies in question, and the relationship between these societies and the academy as a whole. They raise questions about how faculty should relate to these professional societies as trustees, as authors, as editors, and as referees.

In the case of scholarly societies, we also have some really interesting financial issues. I will give you just one example: Many scholarly societies view part of their mission, and legitimately so, as not just as facilitating scholarly communication by publishing, but also as advancing advocacy for their discipline, advocacy for research funding for their discipline, public outreach, and education about their discipline. They address pipeline issues, trying to do things to ensure, for example, that high school students get interested in careers in biology or astronomy or whatever the subject is. These are all meritorious activities. But right now we are seeing some evidence that these activities are being cross-subsidized from library budgets which are intended to support the dissemination and preservation of scholarship. And it's not clear, at least to me, that that's the right framework for funding these generally meritorious activities. So I think we need to think carefully about what our scholarly societies are doing, how their activities reflect the values around copyright and intellectual property of the academy and how the necessary funding stream is going to reach them if they are going to continue to support these values.

The Role and Policies of Cultural Memory Organizations within Universities

A wealth of cultural memory organizations are embedded within our universities: museums (some large campuses have dozens of these); archives; libraries; public broadcasting units with rich archives; herbaria and botanical collections; and other organizations. All of these groups are sitting on enormous masses of academically significant content, which is either out of copyright or to which the institution holds the rights. They have some interesting choices to make as they digitize this material. Arguably, what these cultural memory organizations need to be doing, as rapidly as funding permits, is to digitize this material and make it very broadly available on the net for building-upon, marking it as out of copyright or attaching broad standardized use permissions such as those developed by the Creative Commons. There are many reasons for this: to make the materials more widely available, to advance scholarship, and to protect the material from unnecessary physical wear and even to provide some level of insurance against physical disasters. Many institutions are in fact doing just this.

Unfortunately, one of the things that happened in the broader museum communities (not just, and not primarily, university museums) in the early 1990's as part of the run up to the great "dot com" bubble and burst, was that various entrepreneurs made the rounds of the museum directors whispering that, "In a digital world, if you licensed all of your stuff to us, preferably exclusively, we can monetize your collection. We'll fund the digitization, or at least help, and we can take care of getting it done if you don't want to manage it in-house. We can provide your museum with revenue streams beyond your wildest dreams of avarice. It will be great. You can expand. You can buy more stuff. You can do all the things that you can't afford to do today." And some organizations signed these agreements. Others did not. But even the ones that did not got very cautious about opening up their materials for public access on the net because there was the perception that, if you put your material up digitally and opened it up, you are writing off a huge revenue stream. Now, to the best of my knowledge, this huge revenue stream has not materialized; tens or hundreds of thousands of people simply aren't going to license the right to browse images from your collection on the web for \$30/person/month for eternity; scholarly authors aren't going to license these images for inclusion in their monographs in vast numbers at \$1000 per image (and they shouldn't have to!). And I don't think it's going to show up for most archives, and for most library special collections, and for most museums. Yes, there are some small modest revenue streams that you are going to miss, some royalties from mouse pads, posters and t-shirts, perhaps, and even here for the materials that are still under copyright, it's possible to attach license terms that entitle the institution to a cut of these kinds of revenue streams.

The loss of the revenue stream is usually going to be insignificant when weighted against the contribution to advancing academy's mission that will be made as these digital resources become available to the academy and to the public at large. And the cost of collecting the revenue stream, in terms of friction and barriers in the system of scholarship and scholarly communication is very large, just as it is with the permissions culture discussed earlier.

One person that has been wonderfully articulate on this recently is Ken Hamma, from the J. Paul Getty Museum, who did a lovely talk on this issue at the Spring 2005 CNI meeting, specifically about museums; an excellent paper of his on this topic appears in the November 2005 issue of *D-Lib Magazine*.

The situation varies from one type of cultural memory organization to another: probably libraries have the strongest bias towards providing the

broadest possible access to their digital content, and the best resource base for creating digital resources; museums are more cautious; many of the other players are resource-starved. For public broadcasting, this is really a new idea: it historically hasn't been technically feasible to open up their archives the way it is becoming today.

In terms of institutional policy, the first priority is to make sure that each embedded cultural memory organization understands the broad policy goals of their parent institution — particularly in terms of facilitating scholarship, teaching and learning and scholarly communication. Cultural memory organizations need to understand how they can contribute to these goals by setting the right policies and making the right investments. Their parent institutions, in turn, need to think through how to ensure that these cultural memory organizations get enough resources, and enough support from other units within the university (particularly on technical and infrastructure issues) to take advantage of the opportunities. And, perhaps more contentiously, they need to carefully consider how much autonomy they are willing to give these embedded organizations to chose behaviors, policies, and investments that actually run counter to the overarching policy goals of the university as a whole.

Technology Transfer and Licensing Policies

A final area that I want to discuss very briefly is university technology transfer operations (sometimes called technology licensing operations). While these operations typically deal with inventions that are protected by patents rather than copyrights, they deserve mention in this discussion because of the implied policy position that they suggest by their existence and their activities. This position requires scrutiny and careful thought.

Now, tech transfer operations became very fashionable in the 1980's following passage of the Bayh-Dole legislation; they were established to ensure that inventions developed by faculty got patented, and that an effort was then made to license those patents to industry in such a way as to maximize the revenue stream back to the university (which is typically shared with the faculty inventors). The result was that universities established offices with people who basically wandered around the university looking for stuff to patent and for entrepreneurial faculty; this then extended to trying to persuade faculty to look at their work through the lenses of patentable discoveries and entrepreneurship. There are a few cases where universities have really won big on this, and have enjoyed hundreds of millions of dollars of revenue stream from a

discovery or cluster of discoveries. A lot of the big successes have been around biotechnology related areas. But for each winner, it seems, there may be quite a few losers. In January 2005, the U.S. National Academies, in partnership with the Organisation for Economic Co-operation and Development (OECD), hosted a conference on the knowledge economy, at which several scholars suggested that only a very small number of the technology transfer offices in place in higher education in the U.S. are even covering their own overhead. Part of the problem is that current experience suggests a jackpot effect in the economics of technology licensing, and the jackpot is large enough to really make a difference. But looking too hard for the long-shot jackpot, creating barriers to the dissemination of knowledge and unhealthy changes to the academic culture in order to obtain more opportunities to play for the jackpot, can be much worse than not winning the jackpot. The issue is one of balance.

Computer science is a discipline where I think we have seen some fascinating conflicts between the tech transfer organizations, whose mission is to generate cash for the university, and computer science faculty, who are interested in getting their work used, recognized, and built-upon, as well as cash (which they often have other ways of getting, through consulting or participation in start-up companies). As not just freely available software, but fully open source software, has increasingly become the standard model of distributing research software widely and to building communities of interest around such software, we have seen a clear collision of values. To the credit of the academy, my impression is that the values and preferences of the computer science faculty have generally triumphed.

Another way to think about technology transfer offices is to recognize that there is indeed nothing inherently wrong with them, and that they can help advance several useful goals: providing income streams to the university, and helping to build the economy by transferring university knowledge into the commercial sector. The potential problems that arise, in my view, is that they can tie up patents and other works in ways that impede research and teaching, that impede the dissemination of knowledge, and that give rise to a culture of ownership, secrecy, and greed. Perhaps what we need to do is counter-balance the technology transfer operations on our campuses with new offices of knowledge dissemination, which argue that patents be filed only when it makes sense to do so defensively and, if so, then dedicated to the public domain, or at least made freely available for any research or educational use; that advocates non-exclusive terms and standing research exemptions when licenses for university patents *are* issued; and that generally promotes a culture of sharing and circles of gifts, at least within the research and

education worlds. This would make it much easier for technology transfer operations to co-exist comfortably with the overall missions of the academy. It may also be helpful as universities recognize more and more that patents issued to organizations outside the academy are becoming barriers to academic research, and that they may ultimately need to argue for some public policy relief in this area.

Conclusions: What the Academic Community Must Do Now

Advocacy and engagement in legal and public policy debates about intellectual property is necessary, indeed essential, but it is not enough.

As faculty, students, and administrators — collectively, the current stewards of the academic enterprise — we need to question and examine institutional policies and institutional culture with respect to the use of the scholarly and cultural record. We need to recognize that the choices we make here will largely shape the ability of academic to continue to do scholarly work in the future. Behaviors consistent with academic values and mission within the broad academic community needs to be encouraged, supported, and rewarded for those within the academic sphere; if necessary, a calculus of mutual deterrence will need to be incorporated in policies towards commercial actors outside of the academy as a way of encouraging them to recognize and honor academic values and missions in their dealings with the academy. There will be hard choices about whether to exclude organizations that have traditionally been viewed as part of the academy but that are no longer behaving in a way that advances the academic values we need to support.

I believe that we need to make policy choices that show the way forward, towards a desirable future, rather than to simply match the most problematic and destructive practices being promoted by the commercial sectors (though there are, as already discussed, some real questions about when strategies of reciprocity are appropriate as tools for trying to change commercial sector behavior). We must also recognize that the choices we make, institution by institution, will play a key role in defining the unique character and culture of each of our academic institutions (and also our disciplines, to the extent that disciplinary norms rather than institutional norms dominate in some practices, such as data sharing) in the new century. Collectively, these choices about institutional culture will shape the future of overall academic culture and the practice of scholarship to come.