Defending the Scholarly Commons

Remarks by David Bollier

Research, Funding and the Public Good: A Scholarly Communications Event
Georgetown University, Washington, D.C.
November 16, 2004

Who would have thought that scholarly communications, a topic that was fairly stable and mundane, would become such a volatile, complex stew of digital technologies, library management, federal funding policy, and changing market practices? Of course, in talking about scholarly communications, we are not just talking about high-tech capabilities and new business models. Our real topic, I would suggest, is the proper mission of the university in American society and how best to actualize it. We are talking about what is a university all about.

The proliferation of new digital technologies and market structures is forcing us to confront this core question. It's about time. It's now clear that the Internet and other digital innovations are not transient phenomena. They are here to stay, and they are transforming the most basic practices of science and scholarship, not to mention the very structures of the corporation and the global marketplace.

It's time that we consider how these changes enhance or impede the basic goals of the university. There are so many perplexing cross-currents of change, so many new market pressures on the academy, and so many sheer uncertainties looming ahead – blogs, RSS feeds, WiFi, new Google features, all of it wrapped in press hype – that we might reasonably excuse ourselves for being confused. I know I often am.

Yet confusion about the implications of a new technology is one thing. Confusion about the fundamental mission of American universities is another; I'm fairly confident about the latter. Our challenge is not to lose our bearings as we come to terms with the digital future.

To my mind, that's really what this symposium is really about – to explore how research universities can reassert their fundamental values in the brave new world of the Internet, new digital media and fiercely competitive markets. How do we find stable new footings for cherished academic ideals in a tumultuous environment?

The ideals that I'm talking about are perfectly familiar. Universities should be committed to the open, disinterested search for truth, and to the robust sharing of ideas and information among peers. They should be committed to using their knowledge and expertise to serve the public good, and not primarily private interests.

Now, admittedly, the precise definition of these ideals is contestable. Yet I'm not sure we're having enough of a conversation these days about the public purposes of the university. Indeed, I often sense a certain willful disconnection from the issue. It's so big and amorphous. Meanwhile, wealthy corporations are making ever more seductive overtures to universities – multimillion- dollar research partnerships, lucrative technology transfer deals, marketing agreements that treat students as a captive audience, and so on.

It is clear enough that the independence, integrity and prestige of research universities are being challenged as never before. The titles of four of the more notable books pretty much sums up the story:

- Derek Bok's *Universities in the Marketplace: The Commercialization of Higher Education*, looks at worrisome role of corporate money on college sports, research and ethics. The former President of Harvard University argues that universities "are jeopardizing their fundamental mission in their eagerness to make money by agreeing to more and more compromises with basic academic values."

- This topic is also examined by Donald G. Stein of Rutgers in an anthology of essays about American research universities, *Buying In or Selling Out?* Stein comes to much the same conclusion.

- Tufts professor Sheldon Krimsky's book, *Science in the Private Interest,* explores the corruption of biomedical research as big pharmaceutical and biotech companies have become major funders. The goal of pursuing knowledge for its own sake is increasingly being subordinated to the goal of knowledge for profit – producing all sorts of ethical breaches.

- And Corynne McSherry's book, *Who Owns Academic Work? Battling for Control of Intellectual Property,* examines how the idea of "ownership" of knowledge is undermining the gift economy of sharing and innovation in academia.

The common thread in these books is clear. Tensions between the profit-making world of commerce and the protected haven of academic inquiry are growing, especially in scientific research.

These tensions take many forms. Many corporations see the university as a treasure trove of under-leveraged knowledge, which can be turned into lucrative patents and products. Other corporations see the university's sports programs and student body as a huckster's dream – a cheap way to reach a young and targeted demographic cohort that is still forming its brand loyalties. So we have apparel makers, junk food makers and credit card companies competing to capture students' "mind share" – as if professors don't have enough trouble in that task!

There is a particular tension between commercial and academic interests that brings us together today. That is the recent NIH initiative on open access publishing. This initiative is less a matter of companies trying to exploit university resources in new ways as it is about universities trying to reclaim greater control over what they already produce and own. It's also about government, acting on behalf of taxpayers, trying to reclaim ownership of research that it has already paid for.

As many of you know, the National Institutes for Health adopted a set of recommendations in July that would have the effect of making the medical research funded by the NIH available under open access protocols. This means that once an article is accepted for publication at a peer-reviewed journal, it would also have to be deposited in PubMed Central, the online NIH library of medical literature. PubMed Central would then provide open access to the article six months after its original publication.

I might add, the comment period for the NIH proposal closes today, November 16. Hurry and get your comments in! If Congress does not intervene to stop the NIH proposal, some $28 billion of federally funded research will be soon be available on an open access basis, starting in fiscal year 2005.

This initiative, as you might imagine, is a major breakthrough in the struggle to make scientific research more widely available. It represents one of the first steps in a major shift in the paradigm of scholarly publishing. By removing the barriers of price and copyright permissions, the open access model would help make the research generated by universities more available and more influential than ever before. Permission issues as copyright and licensing restrictions, as well as price barriers such as subscriptions, licensing fees and pay-per-view fees, would be largely eliminated. The boon to researchers, less developed countries and the general public is obvious.

But there would be another huge gain. Open access publishing promises to let taxpayers reap direct benefits from what they already pay for. This is a matter of simple fairness. Why should the enormously valuable work that taxpayers finance be given away or privatized? My colleague Peter Suber, who runs the Open Access Project at Public Knowledge and is the Editor of the Open Access News, has helped me understand the diverse benefits of open access publishing:

- *Authors* will enjoy the possibility of a much larger readership and impact among peers, adjacent disciplines and the general public.

- *Readers* will have a much richer universe of literature that they can access and search online.

- *Teachers and students* will not have to struggle with complicated licensing or permissions issues in order to share key resources.

- *Libraries* who are struggling with escalating journal prices will reap huge financial savings while also avoiding the permissions quagmire.

- *Universities* will be able to enhance the visibility of their faculty's work while making it widely available to the world.

- *Funding agencies and governments* that mandate OA standards will reap greater returns on their investments in research.

The only party that opposes the NIH open access initiative is subscription-based publishers. This is perhaps understandable, but the NIH has taken pains to cushion the impact on them. It has also promised to revisit its open access policies, as necessary, to minimize the impact on publishers in the future. While subscription-based business models will obviously be affected, open access publishing will also have benefits for publishers. As journal articles become more accessible, commercial journals will become more visible and attractive to potential advertisers and authors.

I realize there are many complexities to this transition in publishing models – something that I expect the panel to address later this morning. In my remaining time, I would like to put the NIH initiative in a larger context. It's important that we understand how open access serves the long-term interests of the university and the public good.

We need to talk about how academia "creates value." The issues here transcend open access publishing. What's really at stake here is the long-term vitality of what I call *the scholarly commons.*

The commons is a generic term for understanding how wealth is created through distinct social communities. The dominant language for talking about "wealth creation," of course, is that of the market, as explained by neoclassical economics. I have no quarrel with this rich set of concepts and literature except to point out that too many people – economists chief among them – seem to think that "the market" is the only means by which value can be created.

But the truth of the matter is that the there are other potent models of value-creation – and academia is one of them. In fact, I think there is an entire class of value-creating models that go by the generic term *the commons.* Libraries, land trusts, open source software, public lands, stakeholder trusts like the Alaska Permanent Fund – these are some of the more obvious commons in American life. I have been exploring these issues in a new web log and portal, OntheCommons.org.

If the corporation is the preeminent institution of the market, *the trust* – broadly construed – is the preeminent institution of the commons. The trust takes many forms. Sometimes its "output" can be monetized and shared, as the Alaska Permanent Fund does with the royalties from oil drilling on state lands. But in other instances, the fruit of the commons cannot or should not be converted into money. That's because the common wealth is often an irreducible, inalienable *social wealth.* Typically, a commons must retain its organic integrity for it to remain productive; it cannot be broken into fungible pieces and bought and sold.

My recent, self-appointed mission in life has been to explore the commons as a crucible of value-creation. I believe it is important to recognize the commons as a coherent paradigm. Why? Because it helps us recognize the many non-market mechanisms that create wealth. It is too easy to forget, for example, that the "social architecture" of academic disciplines and of the university itself is tremendously productive.

Let me explain. Science and academia are, at bottom, *gift economies.* They are communities held together by shared moral, social and intellectual commitments. Their members give, get, share and collaborate with each other *without* the vast apparatus of market exchange. Interactions are not generally governed by property rights, legal contracts, and fees.

Very few academics write for money alone. Yes, they are paid salaries, but their individual research and publishing is considered a "contribution" to their fields. Their work is a "gift" to their discipline, which over time repays them with free access to other people's resources and work. This is not sheer altruism, mind you; it is another form of self-interest. Certainly one key motivation for academic research is fame and glory. It is a way to obtain recognition, respect and career advancement.

By the lights of economics and copyright law, much of the knowledge production that goes on in a university is simply illogical. Any economist will tell you that valuable stuff is produced only if people have clear property rights, can negotiate and contract for a good or service, and then pay money for it, making both parties better off.

So if a university is *not* a market system, what is it? *This* is the problem that we must grapple with if we wish to fortify the mission of the university. The language of the market is becoming the default discourse of our time. Yet the university represents a different matrix of value-creation altogether. It is about using social gift-exchange to create valuable knowledge.

This is one reason why I am such a strong advocate for talking about *the commons.* The commons helps us name and analyze the value-creating process that we know as the university – and in so doing, helps us take appropriate steps to protect it. The commons is not just a buzzword or a fresh marketing term. It is a way to explain how trusted communities can be tremendously productive, not just in a traditional economic sense, but in a social and personal sense as well.

Yale Professor Yochai Benkler, a leading theorist of the commons, has explained why a knowledge commons can be vastly more efficient, productive and innovative than a market. A market regime usually entails lots of costs that we don't ordinarily take account of – contracts, enforcement mechanisms like lawsuits, finance capital, marketing, etc. A gift economy, on the other hand – of the sort we often see in academia and on the Internet – can leverage people's trust and social reciprocity. It turns out that this strategy can be fantastically efficient when organized through the light-weight infrastructure of the Internet. That's why so many commons are proliferating online.

Economist Ronald Coase declared in a famous 1934 essay that the rationale for forming corporations is that they can do certain things internally more efficiently than they can be achieved through the market, by paying external vendors. Now, astonishingly, the Internet is turning this proposition inside-out. It is making it more efficient and dynamic for a community of like-minded people to collaborate on shared projects *outside of the firm.* We see this in the use of peer-to-peer file sharing among scientists, and in the success of Linux and hundreds of other open source software projects. We see this in collaborative websites; in the Wikipedia project; in the expansion of social networking software; and in countless other online innovations.

Ecologist Garrett Hardin famously declared the notion of the "tragedy of the commons" in a 1968 essay. His phrase forever joined the word "commons" to the word "tragedy." But the tragedy of the commons is a moot point when it comes to knowledge because knowledge is not a depletable, rivalrous resource. Information does not get "used up," and my use of it does not preclude your use of it. In the digital age, the marginal cost of reproducing and distributing information is virtually nil.

Moreover, the sharing of information results in fantastic *positive externalities*, to use the economist's term. Free riding does not cause a tragedy; it *generates* value. There is a *cornucopia of the commons*, which is sometimes called "network effects." The more people participating in a knowledge commons, the greater the value created. The operative principle is "the more, the merrier." It's one reason why Linux has taken off as an open source computer operating system.

Perhaps you see where I'm going. Open access publishing is an instance of the cornucopia of the commons. It is an instance of the commons performing valuable work more efficiently than the market. In general, the Internet and software technologies have made it cheaper for scientific disciplines to edit and distribute their work themselves. The greater circulation of the knowledge has positive benefits for everyone.

It is important to stress that the commons is not anti-business. The market is not suddenly gratuitous. Even in an open access environment, the market has a role to play and, in fact, there are business models that can work constructively with the commons. For example, if open access journals can manage journal publishing more efficiently than the market, then the value-adding functions of the market can shift to more advanced needs, such as better online searches and indexing. Linux is not eliminating business opportunities; it is shifting them to different types of proprietary value-added – something that IBM, Hewlett-Packard and other large companies have discovered.

Now, I have other reasons for wanting to introduce the idea of the commons. I believe the concept helps us understand and reassert the university's mission in our market-obsessed society. It helps us name the value-creating functions of the university and defend against dangerous market intrusions.

I'd like to speak briefly about two such intrusions on the integrity of the university – the dangers of corporate research partnerships, and the dangers of "propertizing" knowledge that ought to flow freely.

There is little question that the commercialization of promising university research, or technology transfer, has made many useful products more widely available while enriching a handful of universities. But is this piecemeal marketization of the university really such a great bargain over the long haul? There are all sorts of hidden costs when commercial interests start to dictate research agendas, and when proprietary concerns such as secrecy clauses begin to affect university research.

The biggest cost from the commercialization of the academy, I believe, is the diminished vitality of the commons. Sharing, collaboration and transparency suffer when markets arrive. Just because you can't measure or monetize these things doesn't mean that they don't exist or aren't important.

Say you're a professor in a hot field – microbiology, agricultural biotech or computer science – and you are lucky enough to obtain a lucrative consultancy or stock in a corporate startup. Or say you're a "celebrity" law professor or historian who has standing invitations to market your lectures in distance education programs.

It probably won't take very long for the superstars of academia to identify more with their market opportunities than with the obligations and ideals of their discipline. The entrepreneurial professor might reasonably ask: Why should I share my research with colleagues or strangers who might use it to their own advantage or profit? Corporate partners are known for requiring that researchers keep their results secret; or delay their publication for a long time; or suppress results that might harm the company's commercial interests. There are many documented instances of this happening.

My point: When a market ethic begins to supplant the gift economy of scientific research, the university starts to lose its creative vitality and its commitment to the public good.

In a gift economy, your first commitment is to your peers and your shared disciplinary traditions. You aren't worried about the "theft" of your "property" because, in the words of jazz great Dizzy Gillespie, "you can't steal a gift." You belong to a commons. Once the market ethic takes root, however, new property boundaries are created, it's every man for himself and the devil take the hindmost. The productive capacity of the gift economy begins to erode. The propertization of knowledge begins to slow or stop the free flow of knowledge – and knowledge that is privately owned tends to atrophy. It does not *grow.*

If there is an identifiable starting point of this trend, it was in 1980 when Congress enacted the Bayh-Dole Act, authorizing universities to patent the fruits of federally funded research. For decades earlier, there had been a broad consensus that the intellectual property rights of federal research should stay in the public domain, or at least be licensed on a nonexclusive basis. That way, the American people could reap the full measure of value from their collective investments.

In the late 1970s, however, large pharmaceutical, electronics and chemical companies mounted a bold lobbying campaign to reverse the presumption of public ownership of federal research. Even though many members of Congress denounced the move as a sheer giveaway of rights that belong to the American people, Congress thought otherwise and enacted Bayh-Dole. Since then, we have seen a land rush to propertize and sell academic research that was once freely available to all.

Of course, there have been benefits. The flowering of biotechnology parks and silicon corridors in university towns – Austin, Cambridge, Palo Alto, Raleigh-Durham – testifies to this fact. Dozens of important new drugs and medical technologies have been brought to market. Between 1980 and 2000, the number of patents secured by universities grew ten-fold, bringing in more than $1 billion in royalties and licensing fees. During this period, there were more than 1,000 cooperative research agreements between universities and businesses.

These are impressive statistics. But the undeniable economic gains have come at long-term costs and inequities that many universities prefer not to confront. These include a sweeping privatization of publicly funded knowledge; the rise of all sorts of new conflicts-of-interest; shifts in research priorities to short-term commercial goals; and an erosion of public confidence in the independence of university research. I might add that $1.3 billion in patent royalties collected by universities in 2002 went to a relatively small handful of large research universities.

Why should the public not receive any equity in the research it has financed? Why should citizens pay twice for this research – first, as taxpayers/investors, and then again as consumers? The injustice of granting companies and universities exclusive licenses to federal research is especially vivid if the final products are prohibitively expensive and inaccessible to the public. We see this in university patents for HIV and AIDS drugs – Yale and the University of Minnesota are two examples – which pits the university's financial self-interest against the public interest. Public money gave rise to the cancer drug Taxol; the antidepressant Prozac; and the hypertension drug Capoten – but the revenues from these have been essentially privatized.

As research universities begin to act like corporations and aggressively defend their patents against business infringers – and as the line between pure academic research and commercially motivated research blurs – the courts are beginning to wonder why academia should have any special privileges under patent law. Why shouldn't it be treated just like any other market player?

In a ruling of enormous significance, a federal circuit court ruled in *Madey v. Duke* that academic researchers are not entitled to the "experimental use exemption" that allows them to use patented research tools for free. If the Supreme Court lets the ruling stand, universities may soon have to pay to use certain research tools. Universities will be treated like any other market actor, and all sorts of patent holders may come out of the woodwork to demand that they be paid royalties. This would have disastrous consequences for university research. But when we start to grant patents to basic research, we should not be surprised if people start claiming ownership of insights like "$E = MC^2$".

As best I can tell, academia lives within a necessary paradox, one that flirtations with commercialization threaten to unravel. The paradox is this: The wealth of markets – in the form of philanthropy – has helped build the great and small universities of our nation. (The other great supporter of higher education, of course, is ourselves, as taxpayers.) And yet the accrued value of those universities has not been their market capitalization or their ability to sell product, but precisely their independence from the market. Markets and commons may ultimately be interdependent on each other, but to flourish, each must remain distinct and protected by something like the blood/brain barrier.

The challenge, I believe, is to recognize this paradox in all its complexity. We must develop some new understandings about the proper limits of the market and the core competencies of the scholarly commons. We must develop a new consensus about the actual risks and benefits of propertizing knowledge. And then we must develop new institutional rules that steer us away from a "property discourse" and validate the idea of the commons.

If it is to reassert its historic role, the university must recognize that its real power resides in it being insulated and independent from the marketplace. Its productivity, creativity and moral authority comes from its life as a scholarly commons. There will never be a bright line separating academic and market pursuits, of course. But this just makes it all the more important that we must be quite deliberate, and not cavalier, about how the two shall mix in ethical, responsible ways.

I am pleased that Georgetown University is tackling this challenge by holding this symposium – and by starting its own digital library for

Georgetown's scholarly work. Finding new answers will require tenacity and struggle. But there is little question that much will be gained by protecting the integrity of the scholarly commons. Recognizing that there is a commons, and that it is a powerful engine for creating valuable knowledge, is a good way to start the discussion.

###