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## **What's Wrong with the Development of Intellectual Property Policy?**

Intellectual property policy has become the central policy problem of our time. It defines the flow of information and knowledge throughout the economy. It shapes the processes of innovation and competition. It allocates power among competing producers, intermediaries, and consumers. It nurtures and inhibits creativity. It mediates between incumbents and new entrants – between past and future. Any change in policy creates winners and losers.

I feel a bit uncomfortable talking about "intellectual property," because the term means too much, and it adds to the complexity and confusion. People are fascinated with the idea of intellectual property, perhaps rightly so, but discussions about "intellectual property" rather than about patents or about copyright, are too likely to be superficial or misleading. Indeed, there are many other forms of intellectual property besides patents and copyright: trademarks, database rights (in Europe), trade secrets, geographic indications, rights of publicity, sui generis regimes that protect such things as plant varieties, semiconductor masks, domains, and boat hulls. Of course, academics can argue for hours about whether some of these things are truly "intellectual property" in the proper sense of the term, whatever that may be.

So one of the threshold problems in addressing intellectual property policy is that it means too many things. Offences against intellectual property vary greatly in character and degree. Piracy -- deliberate, exploitative mass copying -- is easily understood and condemned. On the other hand, intellectual property infringement can be completely inadvertent, and when inadvertent infringement becomes commonplace, we need to question whether the system is working properly.

The two long-lived and highly evolved regimes, patent and copyright, differ fundamentally from each other in purpose, principle, and operation. In fact, in Europe, patents are considered "industrial property," a term that is uncommon in the U.S. In Europe, copyright is considered a natural right of individual authors, and the very heart of intellectual property. Different values at stake: copyright concerns human expression and cultural tradition; patents concern technical subject matter. Everybody has opinions about copyright, especially as it is affected by information technology; the patent system is of interest primarily to specialists.

Copyright appears to be troublesome because it rests on a hazy standard of "substantial similarity," whereas the claims that delimit patents look precise. However, the formal claims that set the boundaries of patents are often much vaguer, less determinate, and more subject to question than they first appear to be.

Information technology has challenged some of the principal distinctions in copyright law – the difference between copying and performing, between private and public, between publishers and carriers.... The scope of patentable subject matter has expanded to cover a vernacular technology, software, that tens of millions are able to create, leading the system into a crisis over quality. Computer software has challenged the traditional differences between copyright and patent. Not only can both be asserted in the same product, but contract and trade secret can be used as well. Software publishers are trying to move their product to the Web so that they also maintain control at a technological level.

The digital economy has created many challenges for intellectual property. The most obvious challenge is to copyright, but the challenge to patent law is deep and far-reaching.

In the digital world, economic value moves fluidly across distances, jurisdictions, and boundaries of every sort. Content can be replicated perfectly and endlessly. Intellectual property can be spirited across borders to unprotected or unreachable jurisdictions. Everyone, not just producers and intermediaries, is empowered by technology in new, hard-to-assess ways. Consumers enjoy general-purpose technology that in power and functionally differs little from that of producers and intermediaries.

This volatile environment has made intellectual property producers fearful. But intellectual property interests have turned their fear to advantage. They have claimed special status as a central source of value in the knowledge economy. And they have made a case for expanded protection by articulating their fears. Through the simple arguments, they have achieved a multifaceted "strengthening" of protection that may go well beyond responding to specific problems.

From an entrepreneurial perspective, information technology, in particular the Internet and the World Wide Web, has opened up a vast prospect of new business opportunities – although no doubt not as vast as people thought three years. An expanded strategic space with room for lots of differentiated business models looks very enticing for entrepreneurs and investors.

However, from their perspective of policymakers, too much is happening. Traditional policy domains are converging. It is not clear how traditional legal and regulatory principles should be applied. There is danger that premature regulation will not only prejudice the evolution of new businesses but that a willingness to intervene will inhibit private investment generally because of added uncertainty of government intervention. Indeed, there is good reason to be skeptical of the ability of legislatures to understand and respond to the subtleties of a digitally enabled knowledge economy. Legislators lack the resources -- time, money, and expertise -- to address complex problems in volatile environments. The Clinton administration in the U.S. developed a series of principles on global electronic that cautioned against government intervention and against assumption that old legal and regulatory regimes should be extended to cover new environments. Unfortunately, this principle was not applied to intellectual property.

After the dot com bust, you might think that the environment has become less volatile, and that the need for paying attention to intellectual property policy might be less. But on the copyright side, the continuing growth of broadband connections keeps increasing the ease and scope of file-sharing. On the patent side, the bust has resulted in the transfer of tens of thousands of patents from business startups to licensing firms with no business other than extracting revenue from patents.

The real action in intellectual property takes place out of public view. Unlike public regulatory regimes, intellectual property laws work by enabling private regulation. For example, each patent is in itself a regulatory mechanism, a law that the owner can enforce against the world however she wishes. The owner can keep the invention to herself or cut deals with potential users of the technology or file against infringers.

Only the beginning and end of intellectual property regimes are public. Patents are granted and copyrights are registered at the front end and lawsuits are filed and prosecuted at the back end.

The public sees only the tip of iceberg. We get glimpses of how much licensing is going on because some businesses break out licensing income in financial reporting. For example, IBM reports that its licensing income more than doubled from 1996 to 2000, from \$.8 billion to \$1.7 billion, but we don't know how much of this volume involves real technology transfer (where the buyer seeks useful technology on the open market) or how much is in settlement of legal claims against inadvertent infringers that developed the technology on their own.

Without information on licensing, we have little evidence to tell us how the system is working. Testimony as to personal experience doesn't prove anything, nor do panels where someone says the system is working and someone else says, no, it isn't. Stakeholder experience is important, but it needs to be based on proper surveys. Unlike more conventional forms of regulation, there is no neutral body of accumulating expertise, no ongoing institutional focus on how well the system is working.

There is an argument, usually made by lawyers, that claims that intellectual property policy should be developed through litigation. There are advantages to litigation in that judges have to make decisions for one side or another, so presumptively the result will not be the kind of unprincipled sausage-making that you sometimes get in legislation. In a lawsuit, you have two motivated parties willing to expend resources to develop the issues, a smart judge, and the possibility of many smart judges on appeal.

However, litigation doesn't prove anything about how the system as whole is working, because it focuses on particular intellectual property under particular circumstances. Only rarely does a case provide an opportunity for a court to make a determination that affects basic policy on competition and innovation, such as the famous U.S. Supreme Court case, *Universal Studios v. Sony*, which held that videocassette recorders were legal because they had substantial noninfringing uses. Or the recent *State Street* case, which allowed patents on methods of doing business, essentially permitting the first company to come up with a new business model or concept, such as frequent flyer miles, to enjoy a 20-year head start on the competition.

There are other problems with relying on litigation. Full decisions on a record are relatively rare. Only around 75 patent cases go to a full trial each year in the United States. So, it sounds like patent litigation is not such a big problem. Ah, but some 1700 patent lawsuits are filed each year. And how many notice letters claiming infringement are sent? Nobody knows, perhaps hundreds of thousands, perhaps millions. The real reason so few cases end up in litigation is the cost. Here are the figures for 2001. For lawsuits where the amount in controversy is under \$1 million, the average cost is \$499,000. That's for each side. In other words, at this level, the average costs will more than eat up the average amount in controversy, since that will be less than the upper limit of \$1 million. Copyright cases are less costly but still expensive. So that the cases that actually go to trial are likely to be a very small, skewed sample of the total disputes over patent and copyright infringement, because most conflict stops short of full litigation. In fact, the vast majority stops short of filing suit.

There are important things about intellectual property that we can learn from lawsuits, and from lawyers, even though the evidence is anecdotal. We can learn about ways intellectual property is being used and, in some cases, get a sense of serious problems. Hearings recently held by the Federal Trade Commission and the Department of Justice in California present a vivid picture of how uncertainty and high transaction costs surrounding patents can jeopardize investments, especially in small companies, and invite hold-up, ambush, and extortion – costly business problems that are rarely addressed in legal scholarship.

Policymakers understand the fundamental arguments for intellectual property – that invention and creativity is subject to free-riding and will be underproduced if not protected by law. It is harder for them to understand how this principle is limited, that you can't create economic value ad infinitum by just generating "stronger" intellectual property laws. Unfortunately, few politicians will argue for "weaker" intellectual property laws, even if that is what is needed.

In the U.S., intellectual property policy is naturally reflects U.S. strategic interests. The copyright industry is the nation's biggest exporter. With manufacturing and many labor functions (including software programming) now outsourced, patent portfolios provide an important means for ensuring economic control across space and time. In the U.S., arguments have been made for copyright term extension and database protection as needed to keep up with Europe. Arguments are made in Europe for expanded patent protection for software as a means for catching up with the U.S.

There is perhaps a natural tendency for intellectual property leaders to believe that the rest of the world or the rest of the industry should emulate them. This is more than simple narcissism, there is an economic advantage to being the first mover in policy just as there is in business. This depends on remaining ahead of the pack, although it does depend on the rest of the pack running after you, rather than deciding to go off in another direction.

But changes of direction are rare. The scope and level of intellectual property protection keeps growing, usually with the U.S. in the lead, and as long as everybody believes that leaders are right, the leaders have an advantage. Even if the leaders are wrong, they may still win if that get followers to think they are right.

Consider software patents, which appear to be widely despised by people who actually create software. The winners at the firm level are the large computer companies that were the first to pursue portfolios of software patents. U.S. computer companies pushed the limits of the patent system first in the U.S., then in Europe and elsewhere to develop large portfolios and efficient procedures for generating new patents. At the same time, the high density of such patents in the U.S. functions as a barrier against competitors from other countries who are not prepared to navigate in a patent-intensive environment. Furthermore, the expertise for exploiting software patents and for managing the risk and uncertainty they pose, especially in the critical U.S. market, has become a source of advantage for U.S. law firms, which they will enjoy for the foreseeable future.

The push for harmonization, not only of intellectual property laws but all laws that affect or are affected by international commerce, effectively discourages both experimentation and approaches to national and regional policy. Both Europe and the U.S. pushed for raising standards of intellectual property protection in TRIPs (the Agreement on Trade-Related Aspects of Intellectual Property, which has been incorporated in the WTO charter) and then in 1996 WIPO Copyright Treaty, which led to the Digital Millennium Copyright Act and the push for similar rules in Europe.

Europe has been particularly susceptible to the case for harmonization because of the regional case for integrated market. The European Commission is pushing for harmonization in the form of a European Community Patent to reducing the high costs inherent in Europe's multiple patent systems, an obvious disadvantage relative to the U.S. But as with harmonization in other areas, there is a risk of lock-in to whatever the standard develops. Once there is an international

standard enforced by treaty, the inertia is immense, and it is very difficult for any country to legislate against it, however good the reasons for doing so might be.

This problem of lock-in at the international level is particularly severe for intellectual property. Protection keeps "ratcheting up" -- because, once granted, rights are rarely taken away. Not only is that politically difficult but it may also be prohibitively expensive, because that may constitute a taking of private property which requires compensation.

The general political problem is simple, fundamental, and familiar. Policy gets made by the interests most directly affected, especially those with the most resources at stake, and best able to organize to political effect. The consumer interest is, by contrast, dispersed and diluted.

This principle operates at several levels. Large multinational companies are very aware that policy decisions, whether local, national, or foreign, will have an effect on the way they and their competitors do business. They hire people inside and outside the company to make sure their interests are protected – not just to monitor what the legislature is doing but to understand long-term or distant developments that may trigger legislative or regulatory action in the future.

By contrast, consumer interests are diffuse, and consumer organizations seldom have resources to do more than react to crises as they arise. Consumer groups often have difficulty in responding to changing technologies and market conditions, which often leave them fighting old battles or formulating naïve positions based on bygone circumstances. As a result, they have lost battles -- and credibility.

Like companies, consumer organizations can hire lawyers and other experts, but conveying the understanding they bring to complex issues to a dispersed, preoccupied constituency is very difficult. Motivating grass roots action on complex problems is especially difficult because it requires not only understanding the nature of the threat but an ability to articulate an intelligent and politically effective response. Once motivated, consumer groups can be effective at brute force bombardment, but they lack the ability to maneuver in tight political quarters where it may be necessary to turn and compromise on short notice.

Although brute grassroots force can be very effective in influencing intellectual property, it may still not be as effective as sophisticated lobbying that speaks to jobs, exports, and economic significance. With no empirical data or analytic framework, intellectual property policy suffers from rhetoric of personal testimonials, ritual invocations of the value of the innovation and creativity, imaginative scenario building, and bare-knuckle politics.

In this chaotic environment, words are very important. Easy concepts like "piracy" crowd out the hard concepts like "inadvertent infringement." "Stronger" and "Strengthen" are used all the time. No politician is going to suggest "weaker" intellectual property protection. Of course, "stronger" can refer to many different things: extending the term of protection, expanding the scope of protectable subject matter, increased penalties, facilitating enforcement, expediting litigation, or enhancing the quality of patents. You can have your choice.

The political configuration of intellectual property issues keeps changing along with technology and market conditions. Some policy issues are still struggles between producers and users, but third-party interests increasingly enter into policy debate. In copyright, this has worked to the advantage of consumers who have found allies in those eager to sell equipment and Internet services. Copyright owners initially succeeded in persuading Clinton Administration officials that

Internet intermediaries should be liable for the infringements of their customers. Had this standard been enacted, the rapid rollout of the Internet and the Web would drastically slowed. Today, computer manufacturers are fighting against a proposed law that computers have built-in rights management devices.

The political dynamics of patents are quite different. There the principal intermediaries are the patent professionals that benefit from expanding the scope and throughput of the system. Patent policy is disproportionately driven by the needs and interests of the pharmaceutical industry since it is on of the few industries where patents are clearly important. It was the principal advocate of the one-size-fits-all ideology of TRIPs.

Future innovators are not represented in either patent or copyright policy. Even present innovators do not have the luxury of participating in political processes unless they are large and well-established.

The public domain has also been largely unrepresented, but at least our thinking about the public domain has evolved and become more sophisticated. As a consequence, constituencies are forming around the more concrete interests related to the public domain, or, as we now recognize it, the global commons. The communities of interest around open standards and open source software are potentially important forces. Standards communities have not been politically oriented in the past, but we see a politically energized and potentially powerful political force in the open source community – at least in Europe where it has take a strong position against software patents.

The success of the Internet and the World Wide Web provide a new perspective on intellectual property. These two standards-based nonproprietary platforms were not only runaway successes in themselves, they spawned an unprecedented outpouring of related innovation, proprietary and nonproprietary. This would not have happened with anything like the speed it did had the platforms been proprietary and subject to licensing.

The success of open source software and the recent patent policy decisions of the World Wide Web Consortium raise hope that the commons at the heart of the Internet will not only persevere but expand.

On the other hand, there are concerns that principal proprietary infrastructure owner, Microsoft, will rebound from the antitrust litigation with new efforts expand its hegemony over the desktop – this time using patents as part of its strategy. The European Commission's proposed directive of software patents may offer the company an invaluable tool to instill "fear, uncertainty, and doubt" about open source alternatives.

We now also see a flowering of private regulation under copyright. Contracts and technological controls are being used in creative new ways to assert control over content and services under customized terms and conditions – and to tailor private "intellectual property" regimes that can expand and reshape the default rules of public copyright.

Software publishers use shrink-wrap or click-on "contracts of adhesion" to dictate non-negotiable terms. Some courts have accepted this practice at least in some circumstances, and the Uniform Computer Information Transactions Act, adopted in two U.S. states, would fully validate it. Technological measures are employed to manage access and use, and these measures are now themselves protected by the Digital Millennium Copyright Act and similar

laws. So contract and/or technology may make it possible to leverage a copyright-protected platform with great confidence. The DeCSS case shows that this may well disadvantage open source development, which has no means for engaging the content industry – as Microsoft is able to do.

It's true that "intellectual property" is increasingly important in the economy, but that does not mean that more is better. It means that it is more important than ever that we understand what is happening in the real world, that we do policy well, and that we get the laws right.

To make sure we are getting value from intellectual property systems that is greater than the private and social costs, we need a deeper, fact-based understanding of how intellectual property works. It means understanding not just the law, but the practical application of the law and what that means for innovation, competition, and access. It means understanding the balances inherent in intellectual property, whether explicit or implicit – between producers and users, between first-generation and second-generation inventors, between property rights and free competition, between invention and integration, and between lawyers and programmers. It means calibrating the balance in an open and public process.