Chapter 10. The Bad, the Good, and the Ugly

In a famous 1958 study on the economics of the patent system, the distinguished economist Fritz Machlup concluded that

> *If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.*

Almost fifty years later, the first half of this illustrious sentence is more valid than it has ever been. The other half is obsolete. At the time Machlup wrote his report the cancer that is intellectual property was detectable but its action seemed restricted to a few, possibly not vital, economic organs. Nowadays, this cancer is attacking the most vital centers of our economy: metastasis is near and so it is time to face the intellectual monopoly threat squarely, and to take action.

Intellectual monopoly apologists like to portray intellectual property as a cure, a powerful and beneficial medicine alleviating the innovative impotence of competitive markets. If intellectual property is the Viagra of innovation, then it has been prescribed on the basis of the wrong diagnosis to a patient who is not impotent. It may occasionally provide an initial spurt of innovational enthusiasm. Unfortunately, this subsides rather rapidly and is replaced by a rapacious desire to obtain economic satisfaction through the exclusion of as many people as possible from fruitful intellectual intercourse.

As a medicine, intellectual property has serious side effects and scientific studies have found at best weak evidence of temporary beneficial effects. Would you employ such a drug on an otherwise healthy patient? Probably not, unless the illness was life threatening. Yet we have documented that innovation thrives in the absence of intellectual monopoly (the patient is healthy), that the latter has serious side effects (the evils of monopoly) and that a series of scientific studies have found weak or no evidence that it increases innovation (the proposed beneficial effect). The case against intellectual monopoly is decisive, and the second half of Machlup's policy advice is obsolete.

"On the basis of the present knowledge" progressively but effectively abolishing intellectual property protection is the only socially responsible thing to do. Evidence has accumulated during

the last fifty years leaving little doubt about the damaging effects of current intellectual property laws. At the same time, legal, economic, and business know-how has also accumulated about how markets for innovation operates without intellectual monopoly. To rule out abolition *a priori* would be as silly now as it would have been to rule out the abolition of tariffs and trade barriers fifty years ago, when the contemporary trade liberalization process began. For a long time, the few individuals and firms that profited from trade barriers argued that these increased the wealth of the nation, defended homeland companies and jobs. It took a while to realize this was not true, and that trade barriers were nothing more than rent-seeking devices, favoring a minority and dramatically hurting the overall economy and everyone else, beginning with low income consumers. The same is now true of patents and copyright.

A realistic view of intellectual monopoly is that it is a disease rather than a cure. It arises not from a principled effort to increase innovation, but from an evil combination of medieval institutions – guilds, royal licenses, trade restrictions – and the rent-seeking behavior of would be monopolists seeking to fatten their purse at the expense of public prosperity. We may debate if, say, Social Security is worth keeping given the current demographic and financial market evolution, but no one would doubt that it was designed to provide old-age insurance that financial markets were not always capable of providing. Intellectual property, by way of contrast, was never designed to efficiently foster innovation. Essentially, all scientific studies of the current system agree that it is badly broken. So getting rid of it may not be such a bad idea. Still, one should pause. Realizing that intellectual monopoly is a kind of cancer, we recognize that simply cutting it all out at once may not be a good idea. Since intellectual property laws have been around for a long while, we have learned to live with them and a myriad of other legal and informal institutions and practices have grown up around them and in symbiosis with them. Consequently, a sudden elimination of intellectual property laws may bring about collateral damages of an intolerable magnitude.

Take for example the case of pharmaceuticals. Drugs are not only patented, they are also regulated by the government in a myriad of ways. Under the current system, to achieve FDA approval in the United States requires costly clinical trials – and the results of those trials must be made freely available to competitors. Certainly, abolishing patents and simultaneously requiring firms that conduct expensive clinical trials to make their results freely available to competitors, cannot be a good reform. Here patents can only be

sensibly eliminated by simultaneously changing also the process by which the results of clinical trials are made available to the public and to competitors in particular. For example, competitors of firms that conduct expensive clinical trials should not be allowed to make free use of those results. They should have to purchase the results from the firm that conducted the trials perhaps – since monopolization would still be a potential problem – at a price regulated by the FDA. To the extent that clinical trials are already regulated and supervised by the FDA, it seems feasible for the FDA itself to assess the costs involved. The following simple rule would, then, do: any firm producing a drug must share the cost of the clinical trials on an equal basis with all other competing firms producing the same drug.

What this example suggests is that abolition must be approached by smaller steps, and that the sequencing of steps matters. Gradual reform is necessary both because of the need for other institutions, such as the FDA, to reform in parallel, and also because it is a political necessity. The number of people prospering thanks to intellectual monopoly is large and growing. While some of them have accrued so much wealth that one should not really worry about Tom Cruise's pauperization in the wake of intellectual monopoly abolition, for many other this is not the case. For many ordinary people intellectual monopoly has become another way of earning a living and, while most of them would be able to earn an equally good or even better living without it, many others need time to adjust.

In the mean time, there is a vast clutter of ideas for both greatly expanding intellectual property and for useful reform. In this, our concluding, chapter, we try to sort these proposals into the bad, the good, and the just plain ugly.

The Bad

Despite the fact that our system of intellectual property is badly broken, there are those who seek to break it even further. The first priority must be to stem the tide of rent-seekers demanding ever greater privilege. Domestically, within the United States and Europe, there is a continued effort to expand the scope of innovations subject to patent, to extend the length of copyright, and to impose ever more draconian penalties for intellectual property violation. Internationally, the United States – as a net exporter of ideas – has been negotiating dramatic increases in protection of U.S. intellectual monopolists as part of free trade agreements – the recent CAFTA agreement is an outstanding example of this.

There seems to be no end to the list of bad proposals for strengthening intellectual monopoly. To give a partial list starting with the least significant

- Extend the scope of patent to include sports moves and plays.
- Extend the scope of copyright to include news clips, press releases and so forth.
- Allow for patenting of story lines – something the U.S. Patent Office just did by awarding a patent to Mr. Andrew Knight for his "The Zombie Stare" invention.
- Extend copyright to databases, something already in place in the E.U.
- Extend the scope of copyright and patents to the results of scientific research, including that financed by public funds; something already partially achieved with the Bayh-Dole Act.
- Extend the length of copyright in Europe to match that in the U.S. – which is most ironic, as the sponsors of the CTEA and the DMCA in the USA claimed they were necessary to match ... new and longer European copyright terms.
- Extend the set of cases and circumstances in which "refusal to license" is allowed and enforced by anti-trust authorities.
- Impose legal restrictions on the design of computers forcing them to "protect" intellectual property.
- Make producers of software used in P2P exchanges directly liable for any copyright violation carried out with the use of their software, something that may well be in the making after the Supreme Court ruling in the Grokster case.
- Allow the patenting of computer software in Europe – this we escaped, momentarily, due to a sudden spark of rationality by the European Parliament.
- Allow the patenting of any kind of plant variety outside of the United States, where it is already allowed.
- Allow for generalized patenting of genomic products outside of the United States, where it is already allowed.
- Force other countries, especially developing countries, to impose the same draconian intellectual property laws as the U.S., the E.U. and Japan.

All of these are bad ideas – why they are bad should be self-evident by now – and all should be rejected. Developing countries in particular should be wary of negotiating away their intellectual freedom in exchange for greater access to U.S. markets.

The Good

There are a great many things that can be done to make modest improvements in the current system of both patents and copyrights. In the case of patents there are a variety of proposals for making the patent system less vulnerable to "submarine" patenting, and generally tightening up the system so that a patent has some real connection to innovation, and is not merely a claim to someone else's invention. In the case of copyright, the major priority is to make sure that all the abandoned and orphaned works do not forever remain unusable because they are under copyright. For both patents and copyright, a fundamental priority is to prevent the public domain from shrinking further, and, when possible, push back the tight fences that are progressively enclosing it. This means, on the one hand, opposing new proposals for the extension of copyright term and coverage beyond those established by the 1998 DMCA and CTEA. On the other hand, it also means to take proactive actions to defend from rapacious hands what is growing in the public domain and needs to be nurtured. Private economic initiative can be extremely useful along this dimension and the recent Open Innovation Network initiative, led by none other than IBM, is a wonderful case in point.

Briefly described, the Open Innovation Network has been formed by IBM, Philips, Sony and two large Linux resellers, Red Hat – a Linux distributor we discussed in an early chapter – and Novell – another successful Linux distributor, which we forgot to mention, so sorry: you see, business thrives so much in the absence of intellectual monopoly that one cannot even count the number of companies commercializing the un-copyrighted and un-patented free software called Linux. The Open Innovation Network has been set up as a Foundation that aims at buying Linux-related patents from holders and create a pool of intellectual property it can then license for free. Probably more important, though is the commitment, which is part of the Open Innovation Network's charter, to sue anyone who tries to either attack Linux, claiming some parts of it violate an outstanding patent, or dismember it by attempting to patent bits and pieces of it. Patents controlled by OIN will be freely available to anyone agreeing not to assert their own patents against other users who have signed a license with OIN, when using software related to Linux. That a hundred OINs blossom, should be the motto!

Let us continue looking into other short-run improvements to the burden of intellectual monopoly. Jaffe and Lerner document in great detail how the patent system, as it is currently implemented in the U.S., is broken. They make numerous proposals to make

frivolous patents more difficult to get and enforce. We support these proposals in principle – and while we might disagree over some of the details, we expect that were we to debate the matter, they would convince us on some points, and we would convince them on others.

One proposal in particular, is to allow patents to be challenged before they are granted. This would allow real evidence to be brought to bear on the issue of prior art – something the U.S. Patent Office seems to know little about, as the thousands of 'how to swing a swing' patents suggest. Realistically, however, few individuals or firms would be likely to monitor the patent system carefully enough to identify bad patents, or to incur the expense of providing the public good of challenging bad patents. Quillen et al examine the rigor with which the U.S. Patent Office carries out its examining activities and compared it to those of the European and Japanese Patent Offices. They take the opposite approach from Lerner and Jaffe, suggesting that the patent office is not the appropriate place to reach decisions concerning patentability. They conclude by asking

> *...why should we not go to a registration system and avoid the expenses of operating an examination system ... shouldn't we abolish continuing applications so that the USPTO will be able to obtain final decisions as to the patentability of subject matter presented in patent applications and avoid having rework imposed upon it. Finally, so long as the USPTO grants a patent for virtually every application filed, are the courts justified in adhering to the clear and convincing evidence standard for overcoming the statutory presumption of validity?* (pp. 50-51)

It is striking but true that either of these proposals, although they go in opposite directions, would be an improvement over the current system. That speaks volumes about how bad the current system is: mathematicians call a "global minimum" a position such that any movement away from it, in any direction, improves things!

Also of great significance is the proposal of Gallini and Scotchmer to allow the "independent invention" defense to patent claims. That is, they would allow proof that an invention was independently derived, and not obtained directly or indirectly as a consequence of the similar invention that was patented first, as a defense against patent infringement. For example, if you patented the "one-click" with the mouse to past text into a word processor,

and sued me because my word processor also pasted text with just one click, I could defend myself by showing that I had written my word processor in my spare time and had never read your patent, or seen a copy of your word processor. This would not only relieve the innovator from concern that in his ignorance he would run afoul of some existing patent, it would also make it substantially more difficult to engage in submarine warfare, as the inventor who is torpedoed by the submarine could argue, and prove, that his invention was independent. This reform, alone, would be of great social value and would enormously reduce the burden of intellectual monopoly. As we have illustrated repeatedly, simultaneous or independent inventions are almost the rule, rather than the exception, and for many great inventions of the last century – the radio, the TV, the airplane, the telephone – having allowed the two or more independent and simultaneous inventors to both exploit their invention commercially would have greatly benefited consumers and economic progress in general. This is even more true and more relevant today

An alternative reform would be to require mandatory licensing at fees based on estimates of R&D costs. The principle is the following: if it costs $100 to invent a gadget, 10% is a reasonable rate of return on this type of investment, and expected demand for licensing is in the order of 100 units, then a net present value fee of $1.10 would be right. Toss in five extra cent for the uncertainty, and set mandatory licensing at a fee of $1.15 for this particular patent. William Kingston takes a more serious look at how this might work in practice, particularly figuring a multiplier to account for the many failed innovations needed to produce a successful one. He points out that cost estimates are already widely used in patent litigation and are not so difficult to produce and document. He estimates that, for most of the cases he studied, the total revenue from licensing products that are successfully patented and licensed should be about eight times their R&D cost, if the license is taken immediately; for licenses issued at the products actually go to market, a multiplier of four would be more appropriate. In the case of pharmaceuticals, he suggests a multiple of two would be sufficient – noting that "If three such licenses were taken, the payments would [already] put the product into the most profitable decile (the home of the blockbuster drugs)."

A backdoor to reducing the term of patent, and making it less easy to accidentally run afoul of long-standing but meaningless patents, would be to reintroduce patent renewal – for example, keeping the term of patent fixed, while splitting the twenty year term

into smaller increments, with a renewal required at each stage. This is discussed by Cornelli and Shankerman and by Scotchmer.

In copyright, the most immediate problem is that due to a Congress and Supreme Court 'bought and paid for' – sorry, but after reading both the Congressional hearings on the DMCA and the Supreme Court decision, it is either that or a dramatic case of total IQs dropping to the single digit interval – by the Disney Corporation, works are no longer allowed to fall into the public domain. The triple whammy of giving automatic copyright to every work, whether or not it is registered, eliminating the need for renewal, and extending the term of copyright to be essentially infinite means that over time virtually everything written will become inaccessible. Lessig, among others, documents in great detail the problems caused by these "ugly reforms." He proposes that some of the ill-effect could be undone by a modest renewal fee. Landis and Posner suggest that the legal principle of abandonment could be applied to copyright holders who do not actively make it clear that they are maintaining their copyright. Either or both of these proposal – however politically naïve they might be – would be a great improvement over the current untenable situation.

The debacle we currently face in copyright is that as more and more draconian laws concerning copyright are introduced, less and less real copyright protection is possible, as it has proven impossible to police the P2P networks in any realistic sense. Many have suggested that the way out of this dilemma is through mandatory licensing – much as radio broadcasters simply pay a fixed fee, but require no particular permission to broadcast a song, so payments to copyright holders could be based on the number of times a song is downloaded – and the downloads would be made legal. This is not a perfect proposal – the possibility of manipulating the "download ratings" comes to mind, and the mandatory licensing fee for internet radio was set ridiculously high – but on balance, would probably serve to improve the current situation.

Deregulation

An intermediate position between abolition and the current system would be to get the government out of the copyright and patent business all together, but allow the use of private contracts to enforce intellectual property.

This is a delicate point and deserves some clarification. Beyond copyright and patent, there are also downstream licensing agreements through private contract. That is, before I sell you my book, or show you my idea, I can require you to sign a contract

agreeing not to resell it. Or these contracts can be included as "shrink-wrap" agreements implicitly agreed to when the package is opened, as is the case with much computer software. Strict abolition of intellectual property would require that the government commit to not enforcing these types of agreements. An intermediate to abolition would allow the enforcement of these types of contracts while abolishing legislated copyright terms altogether. Relative to the current situation, this proposal has both pluses and minuses.

In the case of copyright, deregulation would have some negative effects, since fair use and time limits could be eliminated altogether. But since the time limit is effectively gone anyway, and since the courts are moving in the direction of allowing contracts limiting fair use to supersede copyright law, the negative effect would not be so great. On the positive side, third parties would be out of the picture. Once a copyrighted item was leaked onto the Internet, there would be no obligation on my part to figure out if someone else had violated their contract by putting it there. In effect, while the leaker could be sued, the work would never-the-less enter the public domain as a matter of fact. An additional drawback, though, is that this may increase the litigation rate dramatically, with the obvious social costs this implies. Intellectual property lawyers would shift their byzantine skills from the current aim of copyrighting everything to writing more and more complicated copyright contracts and then suing either side for violation of said contracts.

In the case of patents, deregulation would solve a great many problems with few minuses. It would put an end to submarines – since the submarine pirate would not be so able to get me to sign a contract agreeing to pay him for his useless piece of patent paper. And of course independent invention would be protected – the independent inventor would simply avoid signing any licensing contracts. The risk of soaring litigation costs would remain, though, especially when it comes to independent inventions: if you are sitting on a valuable monopoly and someone comes in that has invented the same thing independently, even a miniscule chance that he may not be able to prove it convincingly in front of a court provides a very big incentives at hiring some lawyers and going to court to retain monopoly power.

Abolition

Beyond deregulation is outright abolition. In other words, in addition to eliminating patents and copyrights, we would not have the government enforce collusive contracts such as downstream

licensing agreements. Since economists generally argue in favor of the enforcement of private contracts, it may be a surprise that we argue against some of them in the name of free markets and competition. However, there are two key elements of the usual argument in favor of private contracts that are missing in the case of downstream licensing.

First, downstream licensing restrictions negatively impact people who are not party to the agreement. That is, if I purchase a book by signing a private agreement not to resell copies, this agreement impinges on the right of other people to buy the book from me. These kinds of agreements, in which a group of people agree to limit their provision of some good or service, are usually called cartels and are generally illegal under anti-trust law. If you and I, as owners of bakeries, get together and sign a contract agreeing to limit the number of loaves of bread we will sell, not only will the courts not enforce that contract, but we will be subject to criminal prosecution as well.

Second, economists recognize the important element of transaction costs in determining which contracts should be enforced. "Possession is 9/10ths of the law" is a truth in economics as well as in common parlance. Take the case of slavery. Why should people not be allowed to sign private contracts binding them to slavery? In fact economists have consistently argued against slavery – during the 19th century David Ricardo and John Stuart Mill engaged in a heated public debate with literary luminaries such as Charles Dickens, with the economists opposing slavery, and the literary giants arguing in favor. The fact is that our labor cannot be separated from ourselves. For someone else to own our labor requires them to engage in intrusive and costly supervision of our personal behavior. Selling our labor is not tantamount to selling our house, which is why even renting it – that is, becoming an employee – is quite complicated and subject to a variety of regulations and transaction costs. The transaction costs implied by slavery are socially damaging as they imply violation of privacy and of essential civil liberties. Hence they are commonly rejected on economic, not just moral, grounds. Moreover, there is no economic reason to allow slavery. With well functioning markets, renting labor is a good substitute for owning it. And so we allow the rental of labor, but not the permanent sale.

For intellectual property the reverse is the socially beneficial arrangement: allow the permanent sale, but ban the rental. Again, this is efficient because it minimizes transaction costs. For, with intellectual property, possession belongs to the buyer and not to the

seller. If you sell me a copy of an idea, I now have that idea embodied either in me or in an object I own. For you to control the idea requires intrusive and costly supervision of my private sphere. Similarly if you sell me a book, a CD or a computer file. In each case, I have physical control of the item, and you can control its use only through intrusive measures. Moreover, in the case of well-functioning markets, owning is a good substitute for renting. Our basic argument against intellectual monopoly is that markets will function well in its absence, and so there is no need for a rental market as the latter only effectuates intellectual monopoly.

We emphasize that it is not rental versus sale that is the crucial distinction, but the presence of restrictions on the use made of an idea. Rental agreements over intellectual property that implied no restrictions on the use of the idea during the period for which rental was agreed, would be consistent with our proposal, but would offer little advantages over sale. In the case of an idea, such as an invention or mathematical formula, once you have passed the idea to me, rental has little meaning, since I can neither return my copy of the idea to you, nor promise to forget it after a fixed period of time. In the case of an object embodying an idea, such as a book or CD, you may well rent the object to me for a fixed period of time. However, in the absence of intellectual monopoly effectuated by downstream licensing, I am free to make a copy of the book or CD, and that copy would remain my property even after the rental period expires. There is no economic objection to rental without downstream licensing; on the other hand, while we would not prohibit such rentals, we would not expect such rental markets to be widespread in the absence of intellectual monopoly.

More extreme forms of abolition are possible, even if it is not obvious how desirable they are, or what their practical relevance might be. Still, the economic theorist living inside us must contemplate also these possibilities. Without government grants of monopoly or enforcement of monopolistic contracts, innovators by virtue of their first mover advantage will generally have some monopoly power. There are government policies that can be used to combat even this ephemeral monopoly. For example, at the lesser end, trade-secrecy, digital rights management, and encryption could be eliminated by a law requiring the publication of detailed information about an innovation as a condition of doing business. Of course the transaction costs are probably large, as the definition of "innovation" would suddenly become blurred, and legal challenges could be mounted with relative easiness.

Never the less, the idea is certainly practical. For example, to sell computer software, the seller would be required to make available the source code; to sell a drug, the manufacturer would have to publish the chemical formula. This latter example may convince you that, along certain dimensions, such a proposal is scarcely radical – to sell a drug now, the chemical formula must be published – pharmaceutical companies are not allowed trade-secrecy over their products. Along other dimensions, though, the proposal is more radical. Consider the case in which a new production process or a new business method is adopted, and think about the complexity involved with full disclosure of its details. The very same facts that, in earlier chapters, allowed us to claim that, in the real world, imitation is costly and innovations do not become public information just because they are implemented or because a technical paper is published describing them imply, in this case, that full disclosure may be nearly impossible and most certainly manipulated, leading to excessive legal and transaction costs. So – and rather uncharacteristically of us – we would drop the radical position in this particular case and vote for a system in which, if you are lucky to become a monopolist because you really got there first and the other have a hard time catching up with you, well: lucky you!

There is also the intermediate possibility of allowing the elimination of secrecy through private contract only – that is abolishing all copyright except the GNU public license, which serves to enhance, rather than limit competition. This, in particular, is a form of copyright we would like to see preserved, and extended to patents. Indeed, and limited to the Linux software area, this is pretty much what the Open Network Initiative mentioned earlier on strives to achieve.

On the opposite side of the coin, economists often argue that in the absence of government enforcement of contracts, a contracting "black market" may arise. An example is the prohibition of "usurious" lending contracts that limit the charging of high interest rates, and limit also the penalties that can be contracted for in the case of failure to repay. Naturally an illegal market has sprung up – and organized criminals are happy to lend you money without security at very high interest rates, then come and break your knees if you fail to repay. From a social point of view, the contracts have not been eliminated – but simply pushed out of the civilized world and made object of persecution by the law-and-order system. Would not something similar happen if the government were to stop enforcing shrink-wrap agreements? The answer is "probably not."

Anti-trust law has not created much of a market for breaking the knees of competitors who fail to collude – and however much the RIAA and MPAA might like to break the knees of those leaking copyright material onto the net, they have not had much success in finding them.

Overall, we do not favor the extreme approach of the government actively trying to enforce competition – we favor abolition, including the government refusing to enforce collusive downstream licensing contracts. We would not oppose the private enforcement of licensing contracts, as long as knees and backbones are not allowed to become the channels of enforcement. For example, in the television and movie industry, authorship and profit share is established not according to copyright law, but according to a private contract between the studios and writers union. Without intellectual property such a contract could not be enforced in court – but it could be enforced, for example, by the writers going on strike, or the studios locking out the writers union. This is not necessarily a good thing from an economic perspective. However, it is very costly for the government to become involved in preventing private contract enforcement, hence private non-disruptive enforcement may be the lesser of the two evils. Moreover, this type of enforcement, unlike government enforcement is self-limiting. That is, the studios can always accept the strike and find replacement authors, and the authors can always start studios of their own. Since some downstream monopoly may serve a good social purpose, it seems a poor idea to try to control this type of self-limiting enforcement.

Trademarks

We have given little attention to trademarks – which serve to identify rather than to monopolize. Strangely, trademarks have attracted lots of attention in the anti-global and anti-market movement, with a variety of anti-logo, anti-trademark, anti-big corporation rallies, books, movies, and pamphlets being produced. This, we are afraid, is due more to the double desire of the leading figures in that movement to become a recognizable "logo" themselves, and to the frustration of many youngsters of not owning enough "logo-ized" items, than it is to any serious social loss from the crocodiles stitched on colorful cotton t-shirts. In the eventuality, however, that copyright and patents are significantly weakened, there would be a temptation to substitute trademark for other forms of intellectual property protection. For example, if Disney were to lose the copyright over Mickey Mouse, they would have a strong

temptation to trademark Mickey Mouse, and so prevent the use of Mickey Mouse images. So any effort towards legal reform of copyright and patent law, will necessarily also have to consider how to limit the use of trademarks for purposes of identification, and prevent their use as a substitute for copyright and patents.

Subsides for Innovation and Creation

It is theoretically possible that the competitive market alone provides insufficient incentive to innovate – although there is no evidence that this is the case. Suppose that we succeed in abolishing intellectual monopoly and discover, after a few years, that there is less innovation than would be socially desirable. Unlikely as this event may be, the little theorist in us insists that we nevertheless consider it. Hence, should we reintroduce intellectual monopoly in this case?

Intellectual property law is about the government enforcing private monopolies. In countries without effective tax collection mechanisms, both historically and currently, government grants of monopolies were and are commonplace; we all have seen some old label for a tea or chocolate brand reporting "By Appointment of Her Majesty this or that." As nations develop, more effective tax collection infrastructures have been replacing such revenue devices as the salt monopoly, or the grant of exclusive import rights to the brother-in-law of the president. Hence, the sale by government officials of exclusive rights to carry out this or the other commercial activity or to produce and commercialize certain goods and services have progressively disappeared in almost all advanced market economies. Intellectual property is one of the few remaining anachronisms from the pre-history of modern tax collection; worse, indeed: it is a distorted anachronism that is now being exploited for rent-seeking purposes that are opposite to those for which it was originally established. So the answer is that – if there is indeed a need for extra incentives – it should be done through subsidization and not through government grants of monopoly.

A first question might be what level of subsidy would replace the profits of the current monopolists? Schankerman makes the calculation that a subsidy to R&D of 15%-35% would be enough to provide an incentive equivalent to that currently provided by patents – ironically subsidies of nearly this level are already available in addition to patents, especially in the pharmaceutical industry, as we documented in the previous chapter. Indeed, the offensive sight of the government subsidizing research and then awarding it a private monopoly reaches its absurd height in

academia, where in recent years the mantra of "private-public partnership" has taken hold. A more ridiculous form of public subsidy for private monopolies is hard to imagine.

Like monopolies, subsides can lead to rent-seeking and have distortionary effects, so they should scarcely be a first resort. Some economists, such as Paul Romer, painfully aware of these negative side-effects, have proposed to avoid some of these distortions by narrowly targeted subsides – for example to graduate students who, the evidence suggests, are key instruments in the process of innovation. Others, such as Andreas Irmen and Martin Hellwig, suggest that broad subsides to investment in general – interest rate subsidies, for example – are likely to be the least distortionary. Yet others, such as Michael Kremer, suggest that prizes awarded after the fact create greater incentives to innovate. Nancy Gallini and Suzanne Scotchmer go further and compare various subsidization methods in their recent work. Their technical analysis is beyond the scope of this book, but the bottom line remains: various intelligent forms of subsidizing basic research and even applied invention exist, and an appropriate mix can be found that would greatly improve upon patents and copyright.

The Ugly

Whether the Disney Corporation will get to continue their monopoly of Mickey Mouse does not seem like an issue that should lead either to revolt or non-violent insurrection. But have no doubt – intellectual monopoly threatens both our prosperity and our freedom – it threatens to kill the goose that laid the golden eggs – to strangle innovation all together.

"Do Nothing"

This might seem an exaggerated statement, made only to stir controversy – and sell a few more copies of a our copyrighted book. Yet, despite the fact that by 1433 the great Chinese explorer Cheng Ho's fleets had explored Africa and the Middle East, in the subsequent centuries the world was colonized by Europeans and not by the Chinese. The monopolists of the Ming Dynasty saw a threat to their monopoly – which was then a monopoly of intellectual and administrative power – in the innovative explorations of Cheng Ho and forced him to stop. This lead to a static, inward looking and regressive regime, where Emperors ruled under mottos such as "Stay the Course" and "Do Nothing", and where innovation and progress not only faltered, but were progressively replaced by obsolescence, regression, and, eventually, poverty. And so it is that in the United States we celebrate Christopher Columbus day, rather than Cheng Ho day.

"Stay the Course"

At a smaller scale, but with a no less real impact on world history, we find that intellectual property has delayed the development of the steam engine, the automobile, the airplane, and innumerable other useful things. This took place at a time before the United States became the sole dominant world power, and before a system nearly as noxious as the current system in the United States and the European Union was in place. It took place during a time when very many countries were still competing for world primacy, and the collusive pact among intellectual monopolists that TRIPS has been built to enforce, was not in the cards. If the Wright brothers preferred litigation to invention, at least the French were free to develop the airplane. If Gottlieb Daimler and Karl Benz were the

first to build a practical automobile powered by an internal-combustion engine, their German patent did not prevent John Lambert, only six years later, from developing America's first gasoline-powered automobile. Nor did it prevent the Duryea Brothers, shortly after, from founding America's first company to manufacture and sell gasoline-powered vehicles.

Where, today, is a software innovator to find safe haven from Microsoft's lawyers? Where are the pharmaceutical companies challenging the patents of "big pharma" and producing drugs and vaccines for the millions dying in Africa and elsewhere? Why are no the courageous publishers committed to the idea that the accumulated knowledge contained in the library of Harvard University be should be widely available to new generations defending the Google print initiative? Nowhere, as far as we can tell, and this is a bad omen for the times to come. The legal and political war between the innovators and the monopolists is a real one, and the innovators may not win as the forces of "Stay the Course" and "Do Nothing" are powerful, and on the rise.

Certainly the basic threat to prosperity and liberty can be resolved through sensible reform. But intellectual property is a cancer. The goal must be not merely to make the cancer more benign, but ultimately to get rid of it entirely. So while we are skeptical of the idea of immediately and permanently eliminating intellectual monopoly – the long-term goal should be no less than a complete phase-out. A phased reduction in the length of terms of both patents and copyrights would be the right place to start. By gradually reducing terms, it becomes possible to make the necessary adjustments – for example to FDA regulations, publishing techniques and practices, software development and distribution methods – while at the same time making a commitment to eventual elimination.

Given that it may well be the case that some modest degree of intellectual monopoly is superior to complete abolition – why do we set as a goal complete elimination? Simply because we do not think that a modest degree of intellectual monopoly is sustainable. Once the lobbyist's nose is inside the tent, the entire lobby is sure to follow, and we will once again be faced with a broken patent system and ridiculously long copyright terms. To secure our prosperity and freedom we must abolish intellectual monopoly from the tent entirely.

Notes

The Machlup's quotation is from Machlup [1958]. The recent extension of patents to story lines are discussed in www.emediawire.com/releases/2005/11/emw303435.htm. For the sad effect of the Supreme Court ruling on economic innovation, just take a look at the epitaph that just appeared on www.grokster.com.

Information about the IBM protective patent pool on Linux is in triangle.bizjournals.com/triangle/stories/2005/11/07/daily27.html and in today.reuters.com/investing/FinanceArticle.aspx?type=businessNews&storyID=2005-11-10T091838Z_01_DIT021923_RTRUKOC_0_US-LINUX.xml

Obviously, the "how to swing a swing" patent (United States Patent 6368227) is here just a label for a gigantic, and ever growing class, of patents that are so crazy and unbelievable that one may think we fabricated the whole thing. Well, we must admit that we do not have the level of insane imagination needed to reach the heights achieved by the USPO in cooperation with the most shameless rent-seekers of the world. For entertaining surveys of this modern zoo of legal monstrosities, out of an almost endless list of sites, the following few: www.freepatentsonline.com /crazy.html, www.crazypatents.com, www.totallyabsurd.com, www.patentlysilly.com should keep you amused if not frightened.

Patent renewal schemes are discussed in Cornellia and Shankerman [1999] and Scotchmer [1999]. A detailed discussion of possible reforms can be found in Jaffe and Lerner [2004]. Proposal in the opposite direction can be found in Quillen et al [2002] and Quillen and Webster [2001].

The debate between economists and other over slavery is discussed at some length in Levy and Peart [2001]. In addition to defending slavery, Dickens was a strong proponent of copyright law, and was extremely incensed that his works could be legally distributed in the U.S. without his permission. Ironically, a limited form of slavery is still allowed in the music and sport industries, where long-term contracts binding the artist or the athlete to a particular studio or team are commonplace.

Schankerman and Pakes [1987] have studied patent returns. Using their data, Kinston [2001] estimates the subsidies that would be required to replace the current patent system:

> *Schankerman and Pakes reported that for patents in Britain, France and Germany, the returns appear to be only a small fraction of the domestic R&D expenditure of the business enterprises. The means of the discounted sum of rewards from patent age 5 were about $7,000 in Britain and France and $19,000 in Germany. The value of patents as a proportion of total national R&D expenditure was 0.057 in France, 0.068 in Britain and 0.056 in Germany (1986, pp. 1068, 1074). Schankerman subsequently estimated that a subsidy to R&D of 15%-35% would be enough to provide an equivalent incentive to patents (1988, p. 95).*

Other proposals for reform discussed in the text come from Romer [2000], Hellwig and Irmen [2001], Kremer [1998] and Gallini and Scotchmer [2001].