Kevin Carson
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A Libertarian Critique
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In Summary...

“Intellectual property” is theft. Smash the state.

Contents

would be no need for the GPL or CC license. Patents, however, raise far more difficult issues. Vinay Gupta's account of his experiences with the hexayurt, an open-source form of cheap emergency housing for refugees living in shantytowns and tent cities, is instructive in this regard.

> Look, the problem is this: GPL enforceability rests on strong copyright law.
>
> Hardware, however, is typically not covered by copyright, leaving patent.
>
> Patents are expensive.
>
> So you can patent-with-open-license if you can afford it, or you can publish and it drops into the public domain (i.e. is no longer patentable) and some other bastard can patent things around or enclosing your invention, and then you're an unhappy camper.
>
> Been through this with the Hexayurt and there's no good answer right now. I strongly tend towards the public-domain-and-pray approach, personally. [87]

One cannot simply choose not to patent an invention and entrust it safely to the public domain. It is necessary to pay the enormous expense of obtaining a patent in order to enforce the continued public domain status of one's own invention, and keep it from being stolen by corporate pirates.

tise of a Jack the Ripper.[7] So why is it bad for "Luddites" to smash machines that put them out of a job, while technology that puts capitalists out of a job (or out of profit, rather) violates their "property" rights? If the same newspaper publishers whose adoption of new technology rendered skilled workers obsolete, now find themselves threatened by cutting and pasting and hyperlinks—well, it couldn't happen to a nicer bunch of guys. And if the record companies' management and shareholders now find themselves redundant in the face of home sound editing, filesharing, and other forms of new technology, then let them eat cake. If workers don't have a property right in their jobs in the face of new technology, then neither do capitalists have a property in the accrual of profits from a business model rendered obsolete by new technology.

"Intellectual property," finally, hinders innovation in another way we have not yet considered: it increases the cost of putting and keeping one's own ideas in the public domain, for those who prefer to do so. The content originator or inventor must take defensive measures to prevent his idea, which he leaves in the public domain, from being copyrighted by someone else with the intent of depriving him of its use.

This is not such a problem for copyright. Copyleft, the GNU General Public License and the Creative Commons license all presuppose strong copyright laws, and piggyback on standard copyright. Such licenses allow virtually unlimited reproduction and circulation of material under a broad range of circumstances, on the condition that the secondary user make his own use of the material publicly available under the terms of the same license. Copyright protection is simply retained in self-defense, to prevent material in the public domain from being copyrighted by secondary users. Were there no copyright laws in existence in the first place, there

[7] David F. Noble, Progress Without People: New Technology, Unemployment, and the Message of Resistance (Toronto: Between the Lines, 1995), p. 42. 1977), p. 74.

I. The Ethics of "Intellectual Property"

"Intellectual property" is a contentious issue among libertarians. Among the individualist anarchists alone, Lysander Spooner took an absolutist position in favor of patents and copyrights, defending them as binding in perpetuity,[1] whereas Benjamin Tucker classified them as one of his Four Monopolies.

> Fourth, the patent monopoly, which consists in protecting inventors and authors against competition for a period long enough to enable them to extort from the people a reward enormously in excess of the labor measure of their services, — in other words, in giving certain people a right of property for a term of years in laws and facts of Nature, and the power to exact tribute from others for the use of this natural wealth, which should be open to all. The abolition of this monopoly would fill its beneficiaries with a wholesome fear of competition which would cause them to be satisfied with pay for their services equal to that which other laborers get for theirs, and to secure it by placing their products and works on the market at the outset at prices so low that their lines of business

[1] Lysander Spooner, *The Law of Intellectual Property; or, An Essay on the Right of Authors and Inventors to a Perpetual Property in Their Ideas* (Boston: Bela Marsh, 1855) <www.lysanderspooner.org>.

> would be no more tempting to competitors than any other lines.[2]

Although Tucker relegated "intellectual property" to last place among the Four Monopolies, he considered them entirely in terms of their effect on individual exchange, rather than of their effect on industrial structure, or of the structural and institutional relationships between business and the state. This problem of emphasis was a general failing of Tucker's. After 1900, for example, when he finally began to recognize the trusts as a problem, he assumed they had grown beyond the point at which eliminating the money, landlord, and other monopolies would do any good in reining them in; he ignored entirely the great extent of their dependence, as institutions, on direct subsidies and other structural ties to the state. But in fairness to Tucker, at the time he wrote the passage quoted above the corporate transformation of the economy was just getting well underway, and the effect of "intellectual property" still fell primarily at the level of individual exchange.

Ayn Rand regarded patents and copyrights as "the legal implementation of the base of all property rights: a man's right to the product of his mind."

> What the patent and copyright laws acknowledge is the paramount role of mental effort in the production of material values; these laws protect the mind's contribution in its purest form: the origination of an *idea*. The subject of patents and copyrights is *intellectual* property.
>
> An idea as such cannot be protected until it has been given a material form. An invention has to be embodied in a physical model before it can be patented; a

[2] "State Socialism and Anarchism: How Far They Agree, and Wherein They Differ," in Benjamin R. Tucker, *Instead of a Book, By a Man Too Busy to Write One*. Gordon Press facsimile (New York: 1973 [1897]), p. 13.

free and clear. And even if the content provider charges a price for the download, there is a significant rent entailed in the cost of setting up a rival download service and selling the same content for a lower price. So for all but the biggest blockbuster music groups and publishers, if the content provider charges a low enough price, the transaction costs involved in going through a file-sharing network, or setting up a competing download service just to sell the content for fifty cents instead of a dollar, probably exceed the likely returns. Unless the content providers attempt to price gouge in the way that record companies have done in recent years, or they are forced to service the overhead costs from supporting corporate management and shareholders, they are likely to benefit more than suffer from free culture.

Since IP is not necessary to encourage innovation, this means that its main practical effect is to cause economic inefficiency by levying a monopoly charge on the use of existing technology.

In any case, for those whose libertarianism follows from the principles of self-ownership and nonaggression, whether "intellectual property" is necessary for those engaged in certain forms of economic activity to profit is beside the point. The same argument is used by protectionists: certain businesses would be unprofitable if the weren't protected from competition by tariffs. So what? No one has a right to profit at someone else's expense, through the use of force. In particular, no one has the right to make a profit by using the state to prevent others from doing as they please with their own pen and paper, hard drives, or CDs. A business model that isn't profitable without government intervention should fail.

The following example is instructive, as a lesson in double standards. David Noble, in Progress Without People, recounted an incident in the early 1970s when the Washington Post was adopting computerized cold type technology which rendered pressmen obsolete. The pressroom was invaded after hours by pressmen who systematically took apart the machines with the technical exper-

if the deck were not sufficiently stacked already, Congress has more than once extended drug companies' patents beyond the expiration of their normal term under patent law; as just one example, the pharmaceutical companies in 1999 lobbied Congress to extend certain patents by two years by a special act of private law.[6]

Copyrights have also been granted arbitrary extension for certain favored parties (e.g., copyright extension, sponsored by Sonny Bono, for Disney's "Mickey Mouse" trademark). This is in addition to the draconian copyright protections, described above, already in force under general law. But copyright protection is no more necessary for artistic creation than patents are necessary for invention. There are many businesses, in the open-source world, that manage to make money from auxiliary services even though their content itself is not proprietary. For example, even though Red Hat cannot restrict the copying of the Linux software it distributes, it does quite well customizing the software and offering specialized customer support. Phish has actively encouraged fans to share its music free of charge, while making money off of live performances and concessions. Radiohead offered a recent album for free download, collecting only voluntary contributions via what amounted to a glorified PayPal tip jar.

The Radiohead model is especially interesting in its implications for making a living off open-source production. Since, as we have already seen, the cost of the physical capital necessary for recording and sound editing has imploded, the overhead costs which must be serviced by an open-source music distributor are miniscule. And since the listeners themselves bear the cost of physical reproduction (i.e., they burn their own CDs), whatever revenue stream comes in from voluntary contributions—even it averages only a dollar or two per listener—belongs to the artist

[6] Benjamin Grove, "Gibbons Backs Drug Monopoly Bill," Las Vegas Sun, 18 February 2000 <www.ahc.umn.edu>.

> story has to be written or printed. But what the patent or copyright protects is not the physical object as such, but the *idea* which it embodies. By forbidding an unauthorized reproduction of the object, the law declares, in effect, that the physical labor of copying is not the source of the object's value, that that value is created by the originator of the idea and may not be used without his consent; thus the law establishes the property right of a mind to that which it has brought into existence.[3]

Despite her defense of "intellectual property" as a property right rooted in natural law, interestingly, Rand did not pursue the principle consistently to the same logical conclusion as Spooner. Rather than treating it as a right in perpetuity comparable to tangible property rights, to devolve to one's heirs and assigns without limits, she dismissed perpetual duration as an obvious impossibility. Instead, she considered the positive law's provisions for copyright and patent duration as "the most rational solution…."[4]

Perhaps the most absurd development of "intellectual property" absolutism was that of Andrew Galambos. As Stephan Kinsella notes, "[i]t is difficult to find published discussions of Galambos's idea, apparently because his own theories bizarrely restrict the ability of his supporters to disseminate them";[5] students attending his classes were required to sign non-disclosure agreements promising not to circulate his ideas outside the circle of paying customers[6] (a rule which would seem to doom a movement to extinction about

[3] Ayn Rand, *Capitalism: The Unknown Ideal* (New York: The New American Library Inc., 1967), p. 130.

[4] Ibid., p. 132.

[5] N. Stephan Kinsella, *Against Intellectual Property* (Ludwig von Mises Institute, 2008), p. 16n. This monograph first appeared as an article the symposium Applications of Libertarian Legal Theory, published in the *Journal of Libertarian Studies* 15, no. 2 (Spring 2001).

[6] Ibid., p. 27.

as effectively as the Shakers' ban on sexual intercourse). Galambos reputedly dropped a nickel in a box for the heirs of Thomas Paine every time he used the word "liberty," and juxtaposed his first and middle names to avoid infringing on his father's "intellectual property" rights in his name.[7] If he paid royalties on the alphabet to the Tyre Chamber of Commerce, there is no record of it.

Among the Austrians, Ludwig von Mises, no market anarchist, took a largely agnostic attitude toward the legitimacy of patents. As a purely utilitarian assessment of their effect, he argued that they enabled sellers to charge a monopoly price for goods that might not have been offered at all without the use of patents to recoup the cost of development.[8]

Murray Rothbard, on the other hand, was not shy in his denunciation of patents as a fundamental violation of free market principles:

> Patents prevent a man from using his invention even though all the property is his and he has not stolen the invention, either explicitly or implicitly, from the first inventor. Patents, therefore, are grants of exclusive monopoly privilege by the State and are *invasive* of property rights on the market.[9]

Rothbard dismissed utilitarian arguments for patents, based on claims that they are socially necessary to promote innovation, with the contempt they deserved:

> The most popular argument for patents among economists is the utilitarian one that a patent for a

[7] Ibid.

[8] Ludwig von Mises, *Human Action* (Chicago: Regnery, 1949, 1963, 1966), pp. 385–386, 680–681.

[9] Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles* (Auburn, Ala.: The Ludwig von Mises Institute, 1962, 1970, 1993), p. 655.

without patents. In the case of automobiles, office equipment, rubber products, and textiles, the figure was 100%.

The one supposed exception was drugs, according to Scherer, of which 60% would not have been invented. But it's likely Scherer underestimated the effect of drug patents in discouraging or distorting innovation. For one thing, drug companies get an unusually high portion of their R & D funding from the government, and many of their most lucrative products were developed entirely at government expense. And Scherer himself cited evidence to the contrary. The reputation advantage for being the first into a market is considerable. For example in the late 1970s, the structure of the industry and pricing behavior was found to be very similar between drugs with and those without patents. Being the first mover with a non-patented drug allowed a company to maintain a 30% market share and to charge premium prices. We have already seen, in the previous chapter, the extent to which the direction of innovation of skewed by considerations of gaming the patent system and patent trolling the competition. The majority of R & D expenditure is geared toward developing "me, too" drugs: in essence slightly different versions of existing drugs, tweaked just enough to justify repatenting. And of the enormous R & D expenditures which patents are allegedly necessary to allow the drug companies to recoup, a majority goes not to developing the actual drug that goes to market, but to securing patent lockdown on all the possible major variations of that drug.

The injustice is only compounded by government funding of research and innovation, with private industry reaping monopoly profits from technology it spent little or nothing to develop. The Government Patent Policy Act of 1980, with 1984 and 1986 amendments, allowed private industry to keep patents on products developed with government R & D money–and then to charge ten, twenty, or forty times the cost of production. For example, AZT was developed with government money, and the patent subsequently given away to Burroughs Wellcome Corp.84 As

pendent inventions occur all the time. The simultaneity of inventions is a familiar historical fact." Patents also distort whatever research and innovation does occur in artificial directions—toward patentable research, at the expense of non-patentable research.[2] Chakravarthi Raghavan argued, likewise, that patents and industrial security programs prevent sharing of information, and suppress competition in further improvement of patented inventions.[3]

And patents are not necessary as an incentive to innovate. According to Rothbard, invention is motivated not only by the quasi-rents accruing to the first firm to introduce an innovation, but by the threat of being surpassed in product features or productivity by its competitors. He cites Arnold Plant: "In active competition… no business can afford to lag behind its competitors. The reputation of a firm depends upon its ability to keep ahead, to be the first in the market with new improvements in its products and new reductions in their prices."[4]

This is borne out by F. M. Scherer's testimony before the Federal Trade Commission in 1995.[5] Scherer spoke of a survey of 91 companies in which only seven "accorded high significance to patent protection as a factor in their R & D investments." Most of them described patents as "the least important of considerations." Most companies considered their chief motivation in R & D decisions to be "the necessity of remaining competitive, the desire for efficient production, and the desire to expand and diversify their sales." In another study, Scherer found no negative effect on R & D spending as a result of compulsory licensing of patents. A survey of U.S. firms found that 86% of inventions would have been developed

[2] Rothbard, Man, Economy, and State, pp. 655, 658–9.

[3] Chakravarthi Raghavan, Recolonization: GATT, the Uruguay Round & the Third World (Penang, Malaysia: Third World Network, 1990), p. 118.

[4] Rothbard, Power and Market: Government and the Economy (Kansas City: Sheed Andrews and Mcmeel, Inc., 1970,

[5] Scherer testimony, Hearings on Global and Innovation-Based Competition. FTC, 29 November 1995 <www.ftc.gov>.

certain number of years is necessary to encourage a sufficient amount of research expenditure for inventions and innovations in processes and products.

This is a curious argument, because the question immediately arises: By what standard do you judge that research expenditures are "too much," "too little," or just about enough? This is a problem faced by *every* governmental intervention in the market's production. Resources — the better lands, laborers, capital goods, time — in society are limited, and they may be used for countless alternative ends. By what standard does someone assert that certain uses are "excessive," that certain uses are "insufficient," etc.?…

Many advocates of patents believe that the ordinary competitive conditions of the market do not sufficiently encourage the adoption of new processes and that therefore innovations must be coercively promoted by the government. But the market decides on the rate of introduction of new processes just as it decides on the rate of industrialization of a new geographic area. In fact, this argument for patents is very similar to the infant-industry argument for tariffs — that market processes are not sufficient to permit the introduction of worthwhile new processes. And the answer to both these arguments is the same: that people must balance the superior productivity of the new processes against the cost of installing them, i.e., against the advantage possessed by the old process in being already built and in existence. Coercively privileging innovation would needlessly scrap valuable plants already in existence and impose an excessive burden upon consumers. For consumers'

> desires would not be satisfied in the most economic manner.[10]

This is, incidentally, the same sort of argument used for eminent domain, when property is seized for the use of a business that will be "more valuable" to the local economy.

If Rothbard rejected patents in principle, he considered copyright to be perfectly tenable and legitimate, on the assumption that it could be achieved through voluntary contract alone.

> A man writes a book or composes music. When he publishes the book or sheet of music, he imprints on the first page the word "copyright." This indicates that any man who agrees to purchase this product also agrees as part of the exchange *not* to recopy or reproduce this work for sale. In other words, the author does not sell his property outright to the buyer; he sells it *on condition* that the buyer not reproduce it for sale. Since the buyer does not buy the property outright, but only on this condition, any infringement of the contract by him or a subsequent buyer is *implicit theft* and would be treated accordingly on the free market. The copyright is therefore a logical device of property right on the free market.[11]

But the sort of contractual copyright regime Rothbard envisioned would, in fact, be practically untenable.

First, as Kinsella points out, contracts are only binding against the actual parties, so contractual copyright would be unenforceable against third parties who came into possession of copyrighted material.[12]

[10] Ibid., pp. 657–658.

[11] Ibid., p. 654.

[12] Kinsella, *Against Intellectual Property*, p. 46.

VI. Is "Intellectual Property" a Necessary Incentive?

Advocates for "intellectual property" defend it as necessary to encourage innovation, asking what the incentive for innovation or artistic creation would be without it. But in fact patents suppress innovation as much as they encourage it, and many producers in the cultural and information fields have demonstrated that value can be captured without "intellectual property."

Patents are a hindrance to progress because of the "shoulders of giants" effect. Any new invention presupposes a wide variety of existing technologies that are combined and reworked into a new configuration. Patents on existing technologies may or may not marginally increase the incentives to new invention, but they also increase the cost of doing so by levying a tariff on the aggregation of existing knowledge to serve as building blocks of a new invention.78 James Watt's refusal to license his patent on the steam engine, for example, prevented others from improving the design until the patent expired in 1800. This delayed the introduction of locomotives and steamboats.[1]

Rothbard pointed out that patents eliminate "the competitive spur for further research" because incremental innovation based on others' patents is hindered, and because the holder can "rest on his laurels for the entire period of the patent," with no fear of a competitor improving his invention. And they hamper technical progress because "mechanical inventions are discoveries of natural law rather than individual creations, and hence similar inde-

[1] Soderberg, Hacking Capitalism, p. 116.

> By 2010 darknets should be able to offer the same performance as traditional P2P software by exploiting social networking," the article reads, referring to networks that allow file trading whithout revealing the identity of its participants to outside entities. ? Just think what would happen if those 72,866 YouTube friends were able to share Hollywood movies within a P2P network that's as easy to use as YouTube but untraceable by Hollywood. Pouwelse and his colleagues think it's going to happen within the next two years.[3]

[3] Janko Roettgers, "BitTorrent Researcher: Copyright Will Be Obsolete by 2010," New York Times, January 31, 2009 <www.nytimes.com>.

Second, there are serious practical questions about the legal enforceability of contractual copyright — so-called "shrink wrap" contracts — even against the accepting party. Pseudonymous blogger "quasibill," of *The Bell Tower*, writes of the serious problems the common law "meeting of the minds" requirement entails for contract enforcement in general.

> As an initial matter, it is important to clarify that a contract is not a written document. For reasons that should become more apparent as you read on, the written document is nothing more than very good evidence regarding the terms of the contract. It is the agreement of the parties, or to use Anglo-American common law terminology, the "meeting of the minds" that is the actual contract. As such, the contract is a subjective creature by nature, as it requires reading the minds of at least two people.
>
> ….The words written on a document do not constitute the agreement – they are merely evidence of what the parties intended the agreement to be….

In particular, he mentions that courts generally recur to external evidence like standard market practices ("course of industry") to ascertain subjective understanding or intent, in determining whether a "meeting of minds" took place and an enforceable contractual obligation therefore exists.[13]

By this line of reasoning, both the seller's and the buyer's reasonable expectations in regard to enforceability will play a large role in determining whether the buyer did, indeed, assume contractual copyright obligations by the mere act of purchase. In an environment where verifying compliance is costly and the risks of

[13] Quasibill, "Contract Enforcement Consolidation," *The Bell Tower*, December 20, 2007 <the-bell-tower.blogspot.com>.

detection and sanction are low, it is unlikely that either a buyer, or a court after the fact, will take any such contract seriously.

By way of analogy, some employers may demand, as a condition of employment, that their employees not smoke even in their own homes, that they refrain from barroom discussions prejudicial to the employer's reputation, or that they not park on company premises with a weapon concealed in the trunk. In most such cases, the employee is likely to sign an acknowledgement form and accept the job with his fingers crossed, and with the mental reservation that it's "none of their damned business." If a job application asks questions that the prospective employee considers inappropriately nosy or intrusive (i.e. about political sympathies, social affiliations, and the like), he is likely to take the attitude that it's the prospective employer's problem to find out such things at his own effort and expense if he wants to know them badly enough; he is under no obligation to incriminate himself.

Kinsella has expressed skepticism, on similar grounds, regarding the enforceability of shrink-wrap and click-wrap contracts:

> ….[T]here is often no meeting of the minds on the fine print. If the customers routinely just click the "I have read and agree to these terms" box but never do read it, and the vendor knows this, then it's a sort of fiction to assume both sides have actually agreed on these terms….[14]
>
> ….I believe two consenting parties have the right to enter into whatever terms they want, even if they are stricter and more draconian than those set by modern IP law. …[But] I do not believe that something is part of the agreement *merely* because it is written down

[14] Stephan Kinsella comment under Aheram, "The Validity of End User Licesnse Agreements Redux," *Copyfascism Watch*, December 2, 2008 <mises.org>.

wants to facilitate his own use on a wider and more convenient variety of platforms.

A good recent example of the phenomenon Doctorow commented on is the Amazon Kindle. If Amazon suspends a Kindle account (say, because the user returned too many books), the reader becomes an inert chunk of plastic suitable for use as a doorstop or paperweight. All those e-books already bought and paid for can no longer be read. If the reader falls afoul of Amazon's good graces, they'll disable his reader by remote and make the e-books he already "owns" utterly worthless.[2]

But to repeat once again, and for the last time, the laws on which the enforcement of this business model depends are becoming unenforceable, and the business model itself as a result untenable. According to the (probably hyperbolic) claim of Johan Pouwelse, a scholarly analyst of the P2P phenomenon, copyright will become unenforceable by 2010. If his assessment of the timeline is overly optimistic, his analysis of the causes of copyright's obsolescence are on the mark. As file-sharing platforms become more popular, they are simultaneously becoming more robust and more secure. For a growing percentage of young people, all the industry admonitions that "file-sharing is theft" fall on deaf ears. Among those younger than thirty or so, file-sharing is simply something that people do, and will continue to do. Any attempt to change this cultural atmosphere will be a losing, rear-guard battle comparable to that faced by the Religious Right. At the same time, file-sharing networks are becoming increasingly user-friendly and attractive to mainstream participants.

Most important of all is the prospect of anonymity and security against the punitive efforts of the Copyright Nazis at MPAA and RIAA. According to Pouwelse,

[2] Kevin Carson, "What This Country Needs is a Good Pirated Version of Kindle E-Books," C4SS, May 1, 2009 <c4ss.org>.

V. "Intellectual Property," Business Models and Product Design

Earlier, we quoted Murray Rothbard's observation that the enforcement of "intellectual property" rights requires the violation of genuine rights to tangible property. As Cory Doctorow argues, this becomes even more true given the business model required by proprietary digital information:

> It's funny that in the name of protecting "intellectual property," big media companies are willing to do such violence to the idea of real property arguing that since everything we own, from our t-shirts to our cars to our ebooks, embody someone's copyright, patent and trademark, that we're basically just tenant farmers, living on the land of our gracious masters who've seen fit to give us a lease on our homes.[1]

All-pervasive DRM prevents the easy transfer of content between platforms, even when it's simply a matter of the person who purchased a CD or DVD wanting to play it somewhere more convenient. And the DMCA legally prohibits circumventing such DRM, even when — again — the purchaser of the content simply

[1] Cory Doctorow, "In the age of ebooks, you don't own your library," Boing Boing, March 23, 2008 <www.boingboing.net>.

> in the fine print of a click-wrap or similar type agreement; there needs to be true meeting of the minds (for example, suppose I sneak into the last clause of a long click-wrap agreement, "And the purchaser hereby agrees to give me half his income for the rest of his life." Well, I know that you are just gonna click "yes" without reading, so I am aware that you are NOT consenting to this term, so there is no meeting of the minds; that should not be enforceable, and arguably neither should boilerplate, "unreasonable" terms in fine print that the publisher knows the customer is not even really aware of).[15]

Third, the enforcement of contractual copyright, even if enforceable in law, would present enormous problems for verification of compliance. The enormous and draconian body of copyright legislation over the past twenty years should indicate that enforcement of copyright requires an intrusive regulatory and surveillance state, and that copyright is virtually unenforceable without such a mechanism.

The new digital copyright regime has done away with many traditional limitations on copyright from the days when it affected mainly the print medium, like the "first sale" and "fair use" doctrines. We can thank the traditional exceptions to copyright, for example, for the public library and for free access to photocopiers.

Charles Johnson gives, as an example of the fair use exception, the common university practice of making course reserves available for photocopying, rather than expecting every student to buy a scholarly book at the academic publishing houses' steep rates. (I myself have numerous photocopies of books ordered through In-

[15] Kinsella comment under David K. Levine, "Can You Contract Away Fair Use?" *Against Monopoly*, April 13, 2009 <www.againstmonopoly.org>.

terlibrary Loan, which would otherwise have cost me $70 or more, often for slim volumes of under two hundred pages.) But, he says,

> as soon as the University eliminates the paper medium, and facilitates *exactly the same thing* through an non-commercial, internal University course pack website — which does nothing at all more than what the xerox packets did, except that it delivers the information to pixels on a monitor instead of toner on a page — the publishers' racket can run to court, throw up its arms, and start hollering Computers! Internet!, send their lawyers to try to shake down have a discussion with the University administration for new tribute to their monopoly business model, and then, failing that, *utterly uncontroversial* decades-old practices of sharing knowledge among colleagues and students suddenly become a legal case raising core issues like the future of the business model for academic publishers, while even the most absurd protectionist arguments are dutifully repeated by legal flacks on behalf of sustaining the racket….[16]

In the case of digital content, especially, copyright would be virtually unenforceable without not only DRM, but the criminalization of technical means for circumventing it. Imagine buying a car on the contractual understanding that you wouldn't drive it to certain places that the dealership disapproved. In the real world, such a contract would be a dead letter because of the high cost of verifying compliance. But if the contract were governed by the legal regime prevailing in the digital content industries, the car would be designed with built-in blocks against driving the car to forbidden places. And not only that, such blocks would be mandated by

[16] Charles Johnson, "How Intellectual Protectionism promotes the progress of science and the useful arts," *Rad Geek People's Daily*, May 28, 2008 <radgeek.com>.

> lost much of their market share to new federations of small entrepreneurial businesses.[7]

To take the example of Nike shoes themselves, the larger the percentage that brand-name markup contributes to total retail price, over and above actual costs of production, the greater the incentives will become for the factories producing the actual shoes to defect from the international "intellectual property" regime. By producing identical shoes (perhaps with the Swoosh in a red circle-and-slashbar) and cutting Nike out of the loop, the factories can eliminate the brand-name markup, raise wages by several hundred percent, and lower prices sufficiently to market their shoes domestically instead of for export to Western consumers. Likewise, the small, networked flexible manufacturing firms in industrial districts like Emilia-Romagna, to the extent that they still participate in the supply chains of transnational manufacturing corporations, by simply ignoring "intellectual property" laws can bypass the large manufacturers and offer better, cheaper competing versions of their own products.

One of the greatest services libertarians can render to the cause of freedom is to agitate for mass defection from international "intellectual property" agreements like WIPO and TRIPS, and at the same time to promote the development of technical means of circumventing enforcement of copyright law.

[7] David Pollard, "The Future of Business," How to Save the World, January 14, 2004 <blogs.salon.com>.

that can be bypassed; the worker can simply switch to independent production, cut out the middleman, and deal directly with suppliers and outlets.

David Pollard, writing from the imaginary perspective of 2015, remarked on the vulnerability of corporations that follow the Nike model of hollowing themselves out and outsourcing everything:

> In the early 2000s, large corporations that were once hierarchical end-to-end business enterprises began shedding everything that was not deemed 'core competency', in some cases to the point where the only things left were business acumen, market knowledge, experience, decision-making ability, brand name, and aggregation skills. This 'hollowing out' allowed multinationals to achieve enormous leverage and margin. It also made them enormously vulnerable and potentially dispensable.
>
> As outsourcing accelerated, some small companies discovered how to exploit this very vulnerability. When, for example, they identified North American manufacturers outsourcing domestic production to third world plants in the interest of 'increasing productivity', they went directly to the third world manufacturers, offered them a bit more, and then went directly to the North American retailers, and offered to charge them less. The expensive outsourcers quickly found themselves unnecessary middlemen.... The large corporations, having shed everything they thought was non 'core competency', learned to their chagrin that in the connected, information economy, the value of their core competency was much less than the inflated value of their stock, and they have

law, and developing and selling means to circumvent them would be criminal acts. Doesn't sound very libertarian, does it?

In "The Right to Read," Richard Stallman depicted the inevitable logic of such principles, as depicted in a late 21st century society under total copyright lockdown.

> if he lent her his computer, she might read his books. Aside from the fact that you could go to prison for many years for letting someone else read your books, the very idea shocked him at first. Like everyone, he had been taught since elementary school that sharing books was nasty and wrong — something that only pirates would do.
>
> And there wasn't much chance that the SPA — the Software Protection Authority — would fail to catch him. In his software class, Dan had learned that each book had a copyright monitor that reported when and where it was read, and by whom, to Central Licensing. (They used this information to catch reading pirates, but also to sell personal interest profiles to retailers.)...
>
> Of course, Lissa did not necessarily intend to read his books. She might want the computer only to write her midterm. But Dan knew she came from a middle-class family and could hardly afford the tuition, let alone her reading fees. Reading his books might be the only way she could graduate. He understood this situation; he himself had had to borrow to pay for all the research papers he read....
>
> Later on, Dan would learn there was a time when anyone could go to the library and read journal articles, and even books, without having to pay. There were independent scholars who read thousands of pages without government library grants. But in the 1990s, both

commercial and nonprofit journal publishers had begun charging fees for access. By 2047, libraries offering free public access to scholarly literature were a dim memory.

There were ways, of course, to get around the SPA and Central Licensing. They were themselves illegal. Dan had had a classmate in software, Frank Martucci, who had obtained an illicit debugging tool, and used it to skip over the copyright monitor code when reading books. But he had told too many friends about it, and one of them turned him in to the SPA for a reward (students deep in debt were easily tempted into betrayal). In 2047, Frank was in prison, not for pirate reading, but for possessing a debugger.

Dan would later learn that there was a time when anyone could have debugging tools. There were even free debugging tools available on CD or downloadable over the net. But ordinary users started using them to bypass copyright monitors, and eventually a judge ruled that this had become their principal use in actual practice. This meant they were illegal; the debuggers' developers were sent to prison.

Programmers still needed debugging tools, of course, but debugger vendors in 2047 distributed numbered copies only, and only to officially licensed and bonded programmers. The debugger Dan used in software class was kept behind a special firewall so that it could be used only for class exercises.

It was also possible to bypass the copyright monitors by installing a modified system kernel. Dan would eventually find out about the free kernels, even entire free operating systems, that had existed around

Peng writes, "effectively prevent the diffusion of technology to the Third World, and would tremendously increase monopoly royalties of the TNCs whilst curbing the potential development of Third World technology."[5]

Raghavan summed up nicely the effect on the Third World:

> Given the vast outlays in R and D and investments, as well as the short life cycle of some of these products, the leading Industrial Nations are trying to prevent emergence of competition by controlling… the flows of technology to others. The Uruguay round is being sought to be used to create export monopolies for the products of Industrial Nations, and block or slow down the rise of competitive rivals, particularly in the newly industrializing Third World countries. At the same time the technologies of senescent industries of the north are sought to be exported to the South under conditions of assured rentier income.[6]

But to repeat once again: the good news is that, in both the domestic and global economies, this business model is doomed. As argued by a wide range of authors, it sows the seeds of its own destruction.

The shift from physical to human capital as the primary source of productive capacity in so many industries, along with the imploding price and widespread dispersion of ownership of capital equipment in so many industries, means that corporate employers are increasingly hollowed out and only maintain control over the physical production process through legal fictions. When so much of actual physical production is outsourced to the small sweatshop or the home shop, the corporation becomes a redundant "node"

[5] Martin Khor Kok Peng, The Uruguay Round and Third World Sovereignty (Penang, Malaysia: Third World Network, 1990), pp. 29–30.

[6] Raghavan, Recolonization, p. 96.

royalties and licensing revenue reached $37 billion, exceeding the revenue from aircraft export ($29 billion).[2]

It's hardly coincidental that the dominant industrial sectors in the global corporate economy are all heavily dependent on "intellectual property": software, entertainment, biotech, pharmaceuticals, and electronics. And the central focus of the neoliberal regime, which has been falsely identified with "free trade" and "free markets," is on strengthening corporate control over "intellectual property" in the face of the threats we saw described by Michel Bauwens earlier in this paper.

This is the Nike business model, simultaneously celebrated by Tom Peters and condemned by Naomi Klein: outsource production to networked supply chains, with the corporate headquarters retaining control over trademarks and other "intellectual property," finance, and marketing.

In addition, patents are used on a global scale to lock transnational manufacturing corporations into a permanent monopoly of productive technology. The single most totalitarian provision of the Uruguay Round is probably its "industrial property" provisions.[3] The developed world has pushed particularly hard to protect industries relying on or producing "generic technologies," and to restrict diffusion of "dual use" technologies. The U. S.-Japanese trade agreement on semi-conductors, for example, is a "cartel-like, 'managed trade' agreement." So much for "free trade."[4]

The central motivation in the GATT intellectual property regime, however, is to permanently lock in the collective monopoly of advanced technology by TNCs, and prevent independent competition from ever arising in the Third World. It would, as Martin Khor Kok

[2] Perelman, *Steal This Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity* (New York: Palgrave, 2002), p. 36.

[3] Chakravarthi Raghavan, Recolonization: GATT, the Uruguay Round & the Third World (Penang, Malaysia: Third World Network, 1990), pp. 119–20.

[4] Dieter Ernst, Technology, Economic Security and Latecomer Industrialization, quoted in Raghavan, Recolonization, pp. 39–40.

> the turn of the century. But not only were they illegal, like debuggers — you could not install one if you had one, without knowing your computer's root password. And neither the FBI nor Microsoft Support would tell you that.[17]

There's a reason for such draconian controls. As described by Michel Bauwens of the Foundation for Peer-to-Peer Alternatives, the corporate economy faces a growing crisis of realization, in monetizing and capturing profits from use-value created in the immaterial realm. It is becoming increasingly impossible to capture value from the ownership of ideas, designs, and technique — all the "ephemera" and "intellect" that Tom Peters writes about as a component of commodity price — leading to a crisis of sustainability for capitalism.

> Recall the following: the thesis of cognitive capitalism says that we have entered a new phase of capitalism based on the accumulation of knowledge assets, rather than physical production tools. [McKenzie Wark's] vectoralist thesis says that a new class has arisen which controls the vectors of information, i.e. the means through which information and creative products have to pass, for them to realize their exchange value. They both describe the processes of the last 40 years, say the post-1968 period, which saw a furious competition through knowledge-based competition and for the acquisition of knowledge assets, which led to the extraordinary weakening of the scientific and technical commons. And they do this rather well.

[17] Richard Stallman, "The Right to Read" (updated 2007). It originally appeared in the February 1997 issue of *Communications of the ACM* (Volume 40, Number 2) <www.gnu.org>.

> But in my opinion, both theses fail to account for the newest of the new, i.e. to take into account the emergence of peer to peer as social format. What is happening?
>
> In terms of knowledge creation, a vast new information commons is being created, which is increasingly out of the control of cognitive capitalism.[18]

In a later blog post for the P2P Foundation, Bauwens elaborated on the nature of cognitive capitalism as a response to the limits on accumulation in the finite physical realm, attempting a new form of accumulation based on ownership of the cognitive realm. But this attempt is doomed to fail because of the increasing untenability of property rights in the information realm. Various resource and input crises like Peak Oil, he wrote, are creating new limits to growth based on extensive expansion in the physical realm. He compares the imperative for capitalism to switch from extensive to intensive development to the parallel crisis of the chattel slave economy.

> This is no trivial affair, as the failure of extensive development is what brought down earlier civilizations and modes of production. For example, slavery was not only marked by low productivity, but could not extend this productivity as that would require making the slaves more autonomous, so slave-based empires had to grow in space, but at a certain point in that growth, the cost of expansion exceeded the benefits. This is why feudalism finally emerged, a system which refocused on the local, and allowed productivity growth as serfs had a self-interest in growing and ameliorating the tools of production.

[18] Michel Bauwens, *P2P and Human Evolution.* Draft 1.994 (Foundation for P2P Alternatives, June 15, 2005) <integralvisioning.org>.

IV. "Intellectual Property" and the Global Economy

In the contemporary global economy, "intellectual property" plays the same protectionist role for TNCs that tariffs performed in the old national economies. Michael Perelman argues that the upsurge in "intellectual property" protection since the late 1960s has been an integral part of the neoliberal revolution.

Although many old line industries could no longer compete effectively in world markets, exports of intellectual property in the form of royalties and copyright fees soared.

> I have not seen hard data regarding the effect of intellectual property rights on the rate of profit, but I am convinced that it is substantial. Just think about Microsoft and the pharmaceutical industry with their low marginal costs relative to their market prices. For example, Microsoft reported that it makes 85 percent margin on its Windows system.…[1]

Elsewhere he cites figures showing that revenues on "intellectual property" rose, between 1947 and the early 1990s, from ten percent to over half of all American exports. In 1999 export revenues from

[1] Michael Perelman, "Intellectual Property Rights and the Commodity Form: New Dimensions in the Legislative Transfer of Surplus Value," *Review of Radical Political Economics* 35:3 (Summer 2003), pp. 307–308.

Absent legal constraints, it would be profitable to offer competing generic replacements and accessories for other companies' platforms. And in the face of such market competition, there would be strong pressure toward modular product designs that were amenable to repair, and interoperable with other the modular components and accessories of other companies' platforms. Absent the legal constraints presented by patents, an appliance which was designed to thwart ease of repair through incompatibility with other companies' platforms would suffer a competitive disadvantage.

> The alternative to extensive development is intensive development, as happened in the transition from slavery to feudalism. But notice that to do this, the system had to change, the core logic was no longer the same. The dream of our current economy is therefore one of intensive development, to grow in the immaterial field, and this is basically what the experience economy means. The hope that it expresses is that business can simply continue to grow in the immaterial field of experience.

However, Bauwens writes, this is not feasible. The emergence of the peer model of production, based on the non-rivalrous nature and virtually non-existent marginal cost of reproduction of digital information, and coupled with the increasing unenforceability of "intellectual property" laws, means that capital is incapable of realizing returns on ownership in the cognitive realm.

> 1. The creation of non-monetary value is exponential.
> 2. The monetization of such value is linear
>
> In other words, we have a growing discrepancy between the direct creation of use value through social relationships and collective intelligence…, but only a fraction of that value can actually be captured by business and money. Innovation is becoming… an emergent property of the networks rather than an internal R & D affair within corporations; capital is becoming an a posteriori intervention in the realization of innovation, rather than a condition for its occurrence….
>
> What this announces is a crisis of value…, but also essentially a crisis of accumulation of capital. Furthermore, we lack a mechanism for the existing institutional world to re-fund what it receives from the social

> world. So on top of all of that, we have a crisis of social reproduction….[19]

Corporations rely on increasingly authoritarian government legislation to capture value from proprietary information. Johann Soderberg compares the way photocopiers were monitored in the old USSR, to protect the power of elites in that country, to the way the means of digital reproduction are monitored in this country to protect corporate power.[20]

The good news in all this is that, even with the upward ratcheting of "intellectual property" law and of the mandated electronic surveillance technologies for enforcing it, it is still becoming unenforceable. In an age of bittorrent, strong encryption, and proxy servers hosted in international anti-copyright havens, the DMCA is a dead letter for anyone who cares enough to take even minimal trouble to circumvent it.

A good example is the so-called "DeCSS uprising," which followed from an attempt to suppress public discussion of means for circumventing DVD encryption.

> Journalist Eric Corley — better known as Emmanuel Goldstein, a nom de plume borrowed from Orwell's 1984 — posted the code for DeCSS (so called because it decrypts the Content Scrambling System that encrypts DVDs) as a part of a story he wrote in November for the well-known hacker journal 2600. The Motion Picture Association of America (MPAA) claims that Corley defied anticircumvention provisions of the Digital Millennium Copyright Act (DMCA) by posting the offending code….

[19] Michel Bauwens, "Can the experience economy be capitalist?" *P2P Foundation Blog*, September 27, 2007 <blog.p2pfoundation.net>.

[20] Johan Soderberg, *Hacking Capitalism: The Free and Open Source Software Movement* (New York and London: Routledge, 2008), , pp. 144–145.

for corporate institutional power; and second, for the portion of commodity price reflecting embedded rents on artificial property rights to implode.

"Intellectual property" also serves as a bulwark to planned obsolescence and high-overhead production. It's an example of a general law stated by Thomas Hodgskin: Social regulations and commercial prohibitions "compel us to employ more labour than is necessary to obtain the prohibited commodity," or "to give a greater quantity of labour to obtain it than nature requires," and put the difference into the pockets of privileged classes.[31]

A major component of the business model that prevails under existing corporate capitalism is the offer of platforms below-cost, coupled with the sale of patented or copyrighted spare parts, accessories, etc., at an enormous markup. So one buys a cell phone for little or nothing, with the contractual obligation to use only a specified service package for so many years; one buys a fairly cheap printer, which uses enormously expensive ink cartridges; one buys a cheap glucometer, with glucose testing strips that cost $100 a box. And to hack one's phone to use a different service plan, or to manufacture generic ink cartridges or glucose testing strips in competition with the proprietary version, is illegal. To manufacture generic replacement parts for a car or appliance, in competition with the corporate dealership, is likewise illegal.

As it is now, appliances are generally designed to thwart repair. When the Maytag repairman tells you it would cost more that it's worth to repair your washing machine, he's telling the truth. But he fails to add that that state of affairs reflects deliberate design: the washing machine could have been designed on a modular basis, had the company so chosen, so that the defective part might have been cheaply and easily replaced.

[31] Thomas Hodgskin, *Popular Political Economy: Four Lectures Delivered at the London Mechanics' Institution* (London: Printed for Charles and William Tait, Edinburgh, 1827), pp. 3334.

> ....Call it intangibles, good-will (the U.S. accountants' term), brand equity, or the ideas in the heads of thousands of Kraft employees around the world.[29]

Regarding Peters' Minolta example, as Benkler points out the marginal cost of reproducing "its intellect" is virtually zero. So about 90% of the price of that new Minolta comes from tolls to corporate gatekeepers, who have been granted control of that "intellect." In an economy where software and product design were the product of peer networks, unrestricted by the "intellectual property" of old corporate dinosaurs, 90% of the product's price would evaporate overnight. To quote Michael Perelman,

> the so-called weightless economy has more to do with the legislated powers of intellectual property that the government granted to powerful corporations. For example, companies such as Nike, Microsoft, and Pfizer sell stuff that has high value relative to its weight only because their intellectual property rights insulate them from competition.[30]

The same goes for Nike's sneakers. I suspect the amortization cost of the physical capital used to manufacture the shoes in those Asian sweatshops, plus the cost of the sweatshop labor, is less than 10% of the price of the shoes. The wages of the workers could be tripled or quadrupled with negligible impact on the retail price.

How many extra hours does the average person work each week to pay tribute to the owners of the "human imagination"?

The good news is that, as "intellectual property" becomes increasingly unenforceable, we can expect two things: first, for the ownership of proprietary content to become untenable as a basis

[29] Ibid. p. 12.

[30] Michael Perelman, "The Political Economy of Intellectual Property," *Monthly Review*, January 2003 <www.monthlyreview.org>.

> The whole affair began when teenager Jon Johansen wrote DeCSS in order to view DVDs on a Linux machine. The MPAA has since brought suit against him in his native Norway as well. Johansen testified on Thursday that he announced the successful reverse engineering of a DVD on the mailing list of the Linux Video and DVD Project (LiViD), a user resource center for video- and DVD- related work for Linux....
>
> The judge in the case, the honorable Lewis Kaplan of the US District Court in southern New York, issued a preliminary injunction against posting DeCSS. Corley duly took down the code, but did not help his defense by defiantly linking to myriad sites which post DeCSS....
>
> True to their hacker beliefs, Corley supporters came to the trial wearing the DeCSS code on t-shirts. There are also over 300 Websites that still link to the decryption code, many beyond the reach of the MPAA.[21]

This incident, and the humiliating failure of so many other corporate attempts — starting with the "McLibel" case in the UK — to suppress the free circulation of proprietary information or supposedly libelous statements,[22] should demonstrate this beyond the shadow of a doubt.

Every such attempt, inevitably, results in the rapid transfer of files of prohibited information around the Worldwide Web, and the proliferation of mirror sites, orders of magnitude faster than

[21] Deborah Durham-Vichr, "Focus on the DeCSS trial," CNN.Com, July 27, 2000 <archives.cnn.com>.

[22] Numerous examples—the Diebold corporate emails and Sinclair Media boycott, the Alisher Usmanov libel case, the Wikileaks case, etc.—are provided in the appendices to Chapter Nine ("Special Agency Problems of Labor") in Kevin Carson, *Organization Theory: A Libertarian Perspective* (Booksurge, 2008). An earlier online draft of the chapter can be found at <members.tripod.com>.

content owners can suppress any particular violator. The would-be corporate proprietors of information find themselves playing whack-a-mole.

And in the offensive-defensive arms race between the statist surveillance technologies required to enforce proprietary content, and the circumvention technologies needed to trade such content freely, the defensive side will always be a step ahead. Ultimately, the legal suppression of "piracy" by the surveillance state depends on the same sort of people who are responsible for delivering your mail to the correct address — which means things don't look very hopeful for the enemies of freedom.

If the DMCA is unenforceable even with state-mandated DRM and criminalization of technical means of circumvention, and even with taxpayer subsidy to the legal cost of enforcement, what would become of such extensive copyright claims in a free market regime? In a free market regime, where enforcement of such claims is a private good provided at cost, the payment of contractual copyright enforcement would be endogenous — i.e., the cost would be borne by the beneficiary of enforcement.

"Intellectual property" is a form of privilege, just one example of a broader category of artificial property rights.

Like all forms of coercion, artificial property rights create a zero-sum situation in which one party benefits at the other's expense. There is a symmetrical relationship between one party's benefit and the other's loss. While natural property rights benefit everyone by securing the individual's claim to the product of his own effort, artificial property rights enable the holder to collect tribute from the efforts of *others*. Natural property rights are a way of dealing with scarcity; artificial property rights *create* scarcity.

The distinction between natural and artificial property rights is analogous to that of Albert Jay Nock between "labor-made" and

and less and less materials." Peters produces a long string of such examples:

> …My new Minolta 9xi is a lumpy object, but I suspect I paid about $10 for its plastic casing, another $50 for the fine-ground optical glass, and the rest, about $640, for its intellect…[26]
>
> It is a soft world…. Nike contracts for the production of its spiffy footwear in factories around the globe, but it creates the enormous stock value via superb design and, above all, marketing skills. Tom Silverman, founder of upstart Tommy Boy Records, says Nike was the first company to understand that it was in the lifestyle business…. Shoes? Lumps? Forget it! Lifestyle. Image. Speed. Value via intellect and pizazz.[27]
>
> "Microsoft's only factory asset is the human imagination," observed The New York Times Magazine writer Fred Moody. In seminars I've used the slide on which those words appear at least a hundred times, yet every time that simple sentence comes into view on the screen I feel the hairs on the back of my neck bristle.[28]
>
> A few years back, Philip Morris purchased Kraft for $12.9 billion, a fair price in view of its subsequent performance. When the accountants finished their work, it turned out that Philip Morris had bought $1.3 billion worth of "stuff" (tangible assets) and $11.6 billion of "Other." What's the other, the 116/129?

[26] Tom Peters, *The Tom Peters Seminar*, p. 10.
[27] Ibid., pp. 10–11.
[28] Ibid., p. 11.

property" is the only thing that prevents the walls from dissolving, and the Microsoft programmers becoming part of a larger environment of loose peer design networks, with the firm replaced by self-organized, project-based teams — with teams constantly gaining members from and losing them to other teams, projects discontinuing or forking, etc., on the Linux model.

Without "intellectual property," in any industry where the basic production equipment is affordable to all, and bottom-up networking renders management obsolete, it is likely that self-managed, cooperative production will replace the old managerial hierarchies. The network revolution, if its full potential is realized,

> will lead to substantial redistribution of power and money from the twentieth century industrial producers of information, culture, and communications — like Hollywood, the recording industry, and perhaps the broadcasters and some of the telecommunications giants — to a combination of widely diffuse populations around the globe, and the market actors that will build the tools that make this population better able to produce its own information environment rather than buying it ready-made."[25]

Another effect of the shift in importance from tangible to intangible assets is that a growing portion of product prices consists of embedded rents on "intellectual property" and other artificial property rights rather than the material costs of production. Tom Peters cited former 3M strategic planner George Hegg on the increasing portion of product "value" made up of "intellectual property" (i.e., the amount of final price consisting of tribute to the owners of "intellectual property"): "We are trying to sell more and more intellect

[25] James C. Bennett, "The End of Capitalism and the Triumph of the Market Economy," from *Network Commonwealth: The Future of Nations in the Internet Era* (1998, 1999) <www.pattern.com>.

"law-made" property.[23] Were it not for the legal appropriation of the land, Nock argued — i.e., the engrossment of vacant and unimproved land to a favored class which did not appropriate it by its own labor, but was enabled to collect tribute from those who did — economic exploitation would be impossible. Historically, so long as wage employers have to compete with easy access to self-employment, there is a floor under the wages people are willing to work for and a ceiling on the rate of profit. As Kropotkin asked:

> If every peasant-farmer had a piece of land, free from rent and taxes, if he had in addition the tools and the stock necessary for farm labour — Who would plough the lands of the baron? Everyone would look after his own….
>
> If all the men and women in the countryside had their daily bread assured, and their daily needs already satisfied, who would work for our capitalist at a wage of half a crown a day, while the commodities one produces in a day sell in the market for a crown or more?[24]

Defenders of "intellectual property" argue that the innovator deserves the scarcity rents, as a reward for the net contribution to consumers' utility. If the consumer does not consider the innovation a benefit even at the patented price, he is free not to buy it. *Reason* magazine's Ronald Bailey, an enthusiastic supporter of the drug and biotech industries, is a good exemplar of this line of argument. Citing a study that compared the overall economic value to consumers from increased life expectancy to the cost paid for drugs,

[23] Albert Jay Nock, *Our Enemy, the State* (Delavan, Wisc.: Hallberg Publishing Corp., 1983), p. 80

[24] Peter Kropotkin, *The Conquest of Bread* (New York: Vanguard Press, 1926), pp. 36–37.

he argued (in the words of his title) that "drug companies don't get enough money… for the life-saving benefits they give us…."[25]

There's a word for someone who's able to price a good according to the consumer's benefit from it: a monopolist. The normal effect of market competition is for the productivity benefits of new technology to translate directly into lower consumer prices. It is only through artificial property rights that privileged sellers can charge the consumer in proportion to his increased utility, regardless of the cost of supplying the good. Patents impede the normal process of market competition by which technological innovation translates directly into lower consumer cost. They enable the privileged to appropriate productivity gains for themselves, rather than allowing their benefits to be socialized through market competition.

But they do more than that: they make it possible to collect tribute for the "service" of not obstructing production. As John R. Commons observed, the alleged "service" performed by the holder of artificial property rights, in "contributing" some "factor" to production, is defined entirely by his ability to obstruct access to it. As I wrote in *Studies in Mutualist Political Economy*, marginalist economics

> treated the existing structure of property rights over "factors" as a given, and proceeded to show how the product would be distributed among these "factors" according to their marginal contribution. By this method, if slavery were still extant, a marginalist might with a straight face write of the marginal contribution of the slave to the product (imputed, of course, to the slaveowner), and of the "opportunity

[25] Ronald Bailey, "Drug Companies Don't Get Enough Money …," *Reason Hit&Run* blog, February 22, 2006 <www.reason.com>.

> a boss cannot control the workers as one did in the days when the assembly line was dominant. People cannot be treated as workhorses any longer, for the value of the production process is becoming increasingly embodied in the intellectual skills of the worker. This poses a new threat to the traditional firm if it denies participatory organization.
>
> The appearance of break-away computer firms leads one to question the extent to which our existing system of property rights in ideas and information actually protects bosses in other industries against the countervailing power of workers. Perhaps our current system of patents, copyrights, and other intellectual property rights not only impedes competition and fosters monopoly, as some Austrians argue. Intellectual property rights may also reduce the likelihood of break-away firms in general, and discourage the shift to more participatory, cooperative formats.[24]

In this environment, the only thing standing between the old information and media dinosaurs and their total collapse is their so-called "intellectual property" rights — at least to the extent they're still enforceable. Ownership of "intellectual property" becomes the new basis for the power of institutional hierarchies, and the primary structural bulwark for corporate boundaries. Even corporate apologists like Bill Gates and Tom Peters celebrate the network revolution and flattening of hierarchies: they just favor domesticating the process within a corporate framework enforced by ownership of "intellectual property." But the networked designers within Microsoft are doing essentially the same thing that teams of Linux programmers are doing outside the corporate walls. "Intellectual

[24] David L Prychitko, *Marxism and Workers' Self-Management: The Essential Tension* (New York; London; Westport, Conn.: Greenwood Press, 1991), p. 121n.

> ...What is a corporation worth without its employees?
>
> This question was acted out... in London, with the revolutionary birth of St. Luke's ad agency, which was formerly the London office of Chiat/Day. In 1995, the owners of Chiat/Day decided to sell the company to Omnicon — which meant layoffs were looming and Andy Law in the London office wanted none of it. He and his fellow employees decided to rebel. They phoned clients and found them happy to join the rebellion. And so at one blow, London employees and clients were leaving.
>
> Thus arose a fascinating question: What exactly did the "owners" of the London office now own? A few desks and files? Without employees and clients, what was the London branch worth? One dollar, it turned out. That was the purchase price — plus a percentage of profits for seven years — when Omnicon sold the London branch to Law and his cohorts after the merger. They renamed it St. Luke's.... All employees became equal owners... Every year now the company is re-valued, with new shares awarded equally to all.[23]

David Prychitko remarked on the same phenomenon in the tech industry, the so-called "break-away" firms, as far back as 1991:

> Old firms act as embryos for new firms. If a worker or group of workers is not satisfied with the existing firm, each has a skill which he or she controls, and can leave the firm with those skills and establish a new one. In the information age it is becoming more evident that

[23] Marjorie Kelly, "The Corporation as Feudal Estate" (an excerpt from *The Divine Right of Capital*) *Business Ethics*, Summer 2001. Quoted in GreenMoney Journal, Fall 2008 <greenmoneyjournal.com>.

> cost" involved in committing the slave to one or another use.[26]

Such privileges, Maurice Dobb argued, were analogous to a state grant of authority to collect tolls, (much like the medieval robber barons who obstructed commerce between their petty principalities):

> Suppose that tollgates were a general institution, rooted in custom or ancient legal right. Could it reasonably be denied that there would be an important sense in which the income of the tollowning class represented "an appropriation of goods produced by others" and not payment for an "activity directed to the production or transformation of economic goods?" Yet tollcharges would be fixed in competition with alternative roadways, and hence would, presumably, represent prices fixed "in an open market...." Would not the opening and shutting of tollgates become an essential factor of production, according to most current definitions of a factor of production, with as much reason at any rate as many of the functions of the capitalist entrepreneur are so classed today? This factor, like others, could then be said to have a "marginal productivity" and its price be regarded as the measure and equivalent of the service it rendered. At any rate, where is a logical line to be drawn between tollgates and propertyrights over scarce resources in general?[27]

[26] Kevin Carson, *Studies in Mutualist Political Economy* (Blitzprint, 2004), p. 79.

[27] Maurice Dobb, *Political Economy and Capitalism: Some Essays in Economic Tradition*, 2nd rev. ed. (London: Routledge & Kegan Paul Ltd, 1940, 1960), p. 66.

Thorstein Veblen made a similar distinction between property as capitalized serviceability, versus capitalized disserviceability. The latter consisted of power advantages over rivals and the public which enabled owners to obstruct production.[28]

It is sometimes argued, in response to attacks on patents as monopolies, that "all property is a monopoly." True, as far as it goes; but tangible property is a monopoly by the nature of the case. A parcel of land can only be occupied and used by one owner at a time, because it is finite. By nature, two people cannot occupy the same physical space at the same time. "Intellectual property," in contrast, is an artificial monopoly where scarcity would not otherwise exist. And unlike property in tangible goods and land, the defense of which is a necessary outgrowth of the attempt to maintain possession, enforcement of "property rights" in ideas requires the invasion of *someone else's* space. "Patents… invade rather than defend property rights."[29]

Kinsella describes the way that socalled "intellectual property" rights give the holder a right in other people's real — tangible — property. An "intellectual property" right implies that

> "A person who comes up with some useful or creative idea which can guide or direct an actor in the use of his own tangible property thereby instantly gains a right to control all other tangible property in the world, with respect to that property's similar use." This newfangled homesteading technique is so powerful that it gives the creator rights in third parties' already owned tangible property.

[28] Veblen, *The Place of Science in Modern Civilization and other Essays*, p. 352, quoted in John R. Commons, *Institutional Economics* (New York: MacMillan, 1934), p. 664.

[29] Rothbard, *Power and Market: Government and the Economy.* (Kansas City: Sheed Andrews and Mcmeel, Inc., 1970, 1977) , p. 71.

increased option package for himself. In response, the Saatchi brothers took their human capital (in actuality the lion's share of the firm's value) elsewhere to start a new firm, and left a hollow shell owned by the shareholders.[20]

> Interestingly, in 1994 a firm like Saatchi and Saatchi, with few physical assets and a lot of human capital, could have been considered an exception. Not any more. The wave of initial public offerings of purely human capital firms, such as consultant firms, and even technology firms whose main assets are the key employees, is changing the very nature of the firm. Employees are not merely automata in charge of operating valuable assets but valuable assets themselves, operating with commodity-like physical assets.[21]

In another, similar example, the former head of Salomon Brothers' bond trading group formed a new group with former Salomon traders responsible for 87% of the firm's profits.

> …if we take the standpoint that the boundary of the firm is the point up to which top management has the ability to exercise power…, the group was not an integral part of Salomon. It merely rented space, Salomon's name, and capital, and turned over some share of its profits as rent.[22]

Marjorie Kelly gave the breakup of the Chiat/Day ad agency, in 1995, as an example of the same phenomenon.

[20] Zingales, "In Search of New Foundations," p. 1641.

[21] Ibid., p. 1641.

[22] Raghuram Rajan and Luigi Zingales, "The Governance of the New Enterprise," in Xavier Vives, ed., *Corporate Governance: Theoretical and Empirical Perspectives* (Cambridge: Cambridge University Press, 2000), pp. 211–212.

industry (thanks to cheap equipment and software for high quality recording and sound editing), desktop publishing, and to a certain extent even to film (as witnessed by affordable editing technology and the success of *Sky Captain*). Podcasting makes it possible to distribute "radio" and "television" programming, at virtually no cost, to anyone with a broadband connection. A network of amateur contributors have peer-produced an encyclopedia, Wikipedia, which Britannica sees as a rival. As Tom Coates put it, "the gap between what can be accomplished at home and what can be accomplished in a work environment has narrowed dramatically over the last ten to fifteen years."[19]

It's also true of news, with ever-expanding networks of amateurs in venues like Indymedia, alternative new operations like Robert Parry's and Greg Palast's, and natives and American troops blogging news firsthand from Iraq, at the very same time the traditional broadcasting networks are shutting down.

This has profoundly weakened corporate hierarchies in the information and entertainment industries, and created enormous agency problems as well. As the value of human capital increases, and the cost of physical capital investments needed for independent production by human capital decreases, the power of corporate hierarchies becomes less and less relevant. As the value of human relative to physical capital increases, the entry barriers become progressively lower for workers to take their human capital outside the firm and start new firms under their own control. Zingales gives the example of the Saatchi and Saatchi advertising agency. The largest block of shareholders, U.S. fund managers who controlled 30% of stock, thought that gave them effective control of the firm. They attempted to exercise this perceived control by voting down Maurice Saatchi's proposed

[19] Tom Coates, "(Weblogs and) The Mass Amateurisation of (Nearly) Everything..." Plasticbag.org, September 3, 2003 <www.plasticbag.org amateurisation_of_nearly_everything>.

> For example, by inventing a new technique for digging a well, the inventor can prevent all others in the world from digging wells in this manner, even on their own property. To take another example, imagine the time when men lived in caves. One bright guy — let's call him GaltMagnon — decides to build a log cabin on an open field, near his crops. To be sure, this is a good idea, and others notice it. They naturally imitate GaltMagnon, and they start building their own cabins. But the first man to invent a house, according to IP advocates, would have a right to prevent others from building houses on their own land, with their own logs, or to charge them a fee if they do build houses. It is plain that the innovator in these examples becomes a partial owner of the tangible property (e.g., land and logs) of others, due not to first occupation and use of that property (for it is already owned), but due to his coming up with an idea.

Dilbert creator Scott Adams, in a rather feeble attempt to defend copyright, used the analogy of underpants:

> Let me give you an analogy. Let's say your neighbor sneaks into your house while you are gone and borrows your underpants. After wearing your underpants all day, the neighbor launders them, folds them neatly, and returns them to your house in perfect condition, all while you are gone. He tells himself that he will say good things to people about your business — whatever business that is — so this arrangement is good publicity for you. The next time he sees you, he tells you about the underpants because he figures you'll thank him for saying nice things about his business. He informs you that it's a win-win scenario.

> Given that you have full use of your property (the underpants), is it a victimless crime? I would say the owner of the underpants lost something even though his property is physically the same.[30]

This is a remarkably poor analogy. Underpants are a physical object that can only be in one place at a time. When the neighbor borrows my underpants, I no longer have that particular pair in my possession any more. His use of them logically precludes my being able to use them. Physical property is a zero-sum game, in which one person's possession necessarily comes at the expense of everyone else's possession. That is exactly why property rights are a logical conflict avoidance mechanism for physical property: given the fact that a physical object can only be possessed by one person at a time, property rules establish who the rightful owner is and prevent conflict between multiple claimants trying to possess the same thing at the same time. For underpants to be a good analogy, they would have to be reproducible at zero marginal cost so that the same identical pair of underpants could be in ten million dresser drawers at the same time, without the original owner ever losing physical possession of his pair of underpants.

A more accurate analogy would be to suppose that I could cause an exact duplicate of Adams' underpants, created from atoms in my own house, to appear in my own underwear drawer entirely through publicly available knowledge of the configuration of atoms in the original pair, without ever trespassing in Adams' home or disturbing his particular pair of underpants in any way.

Adams' real objection, obviously, is not to the deprivation of the thing itself or its use in any sense, but to loss of the economic value of artistic creations that would result from his sole legal right to sell them. But as Kinsella argues, "one cannot have a right to the

[30] Scott Adams, "Is Copyright Violation Stealing?" *The Dilbert Blog*, April 7, 2007 <dilbertblog.typepad.com>.

> Together, these characteristics have fundamentally altered the capacity of individuals, acting alone or with others, to be active participants in the public sphere as opposed to its passive readers, listeners, or viewers.[16]

The central change that makes this possible is that "the basic physical capital necessary to express and communicate human meaning is the connected personal computer."

> The core functionalities of processing, storage, and communications are widely owned throughout the population of users…. The high capital costs that were a prerequisite to gathering, working, and communicating information, knowledge, and culture, have now been widely distributed in the society. The entry barrier they posed no longer offers a condensation point for the large organizations that once dominated the information environment.[17]

The desktop revolution and the Internet mean that the minimum capital outlay for entering most of the entertainment and information industry has fallen to a few thousand dollars, and the marginal cost of reproduction is zero. If anything that overstates the cost of entry in many cases, considering how rapidly computer value depreciates and the relatively miniscule cost of buying a five-year-old computer and adding RAM. The networked environment, combined with endless varieties of cheap software for creating and editing content, makes it possible for the amateur to produce output of a quality once associated with giant publishing houses and recording companies.[18] That is true of the software industry, the music

[16] Ibid., pp. 212–13.
[17] Ibid., pp. 32–33.
[18] Ibid., p. 54.

Tom Peters remarked in quite similar language, some six years earlier in *The Tom Peters Seminar*, on the changing balance of physical and human capital. Of *Inc.* magazine's 500 top-growth companies, which include a good number of information, computer technology and biotech firms, 34% were launched on initial capital of less than $10,000, 59% on less than $50,000, and 75% on less than $100,000.[13]

In many industries, the initial outlay for entering the market was in the hundreds of thousands of dollars or more. The old electronic mass media, for instance, were "typified by high-cost hubs and cheap, ubiquitous, reception-only systems at the end. This led to a limited range of organizational models for production: those that could collect sufficient funds to set up a hub."[14] The same was true of print periodicals, with the increasing cost of printing equipment from the mid-nineteenth century on serving as the main entry barrier for organizing the hubs. Between 1835 and 1850, the typical startup cost of a newspaper increased from $500 to $100,000 — or from roughly $10,000 to $2.38 million in 2005 dollars.[15]

The networked economy, in contrast, is distinguished by "network architecture and the [low] cost of becoming a speaker."

> The first element is the shift from a hub-and-spoke architecture with unidirectional links to the end points in the mass media, to distributed architecture with multidirectional connections among all nodes in the networked information environment. The second is the practical elimination of communications costs as a barrier to speaking across associational boundaries.

[13] Tom Peters. *The Tom Peters Seminar: Crazy Times Call for Crazy Organizations* (New York: Vintage Books, 1994), p. 35.

[14] Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven and London: Yale University Press, 2006), p. 179.

[15] Ibid., p. 188.

value of one's property, but only in its physical integrity."[31] One cannot argue otherwise without accepting the premises of local zoning laws and assorted aesthetic ordinances (against outbuildings, compost piles, clotheslines, solar panels, front yard gardens, cars parked on lawns, etc., etc.) designed to protect homeowners from a decline in their "property values." One's primary right in a property is to its unfettered use, not to cooperation by others in the maintenance of its resale value. A law that restrains one's use and enjoyment of one's own property, in order to maintain the market value of someone else's property — and all in the name of "property rights," no less — is fundamentally perverse.

Blogger Mark Poncelet, incidentally, came up with a hilarious parody of Adams' underpants analogy:

> Let's not forget that you never actually own your underpants (unless you crochet them yourself. Just be very careful that you don't make a pair that looks like someone else's. You could be liable for damages). Most underpants makers only give you a license to wear them. When you "buy" these underpants, some of that money goes to the person who designed them. The rest goes to the company that massproduced them and the company that shipped them. Some of that money finds its way to entities who are preparing to sue you for wearing your underpants improperly.
>
> I pay a subscription fee to a company that sends me underpants on demand. I can wear them, but they get to choose how often I wear them, and I can't wear similar underpants too many times in a row. When I'm done, I have to send the underpants back. This is a whole lot better than some other methods of getting underpants....

[31] Kinsella, *Against Intellectual Property*, p. 47.

Buy your underpants from iTunes? At least you get to keep them! Yet be prepared to have someone from Apple watch you put them on and take them off….

Regardless of how you get your underpants, there are some brutal realities to consider before you put them on. Like I mentioned above, you don't own these underpants. Someone else does. They're just giving you permission to wear them. In return for this permission, they get to decide a lot.[32]

[32] Mark A. Poncelet, "Leave my underpants alone," *poncelet*, April 9, 2007 <poncelet.livejournal.com>.

> be added. Such trade combinations under patents are the only valid and enforceable trade combinations that can be made in the United States.[11]

And unlike purely private cartels, which tend toward defection and instability, patent control cartels — being based on a state-granted privilege — carry a credible and effective punishment for defection.

Through their "Napoleonic concept of industrial warfare, with inventions and patents as the soldiers of fortune," and through "the research arm of the 'patent offensive,'" manufacturing corporations were able to secure stable control of markets in their respective industries.[12]

Today, "intellectual property" serves as a structural support for corporate boundaries, at a time when the desktop revolution has undermined control of physical capital as their primary justification. The growing importance of human capital, and the implosion of capital outlay costs required to enter the market, have had revolutionary implications for production in the immaterial sphere.

In the old days, the immense value of physical assets was the primary basis for the corporate hierarchy's power, and in particular for its control over human capital and other intangible assets.

As Luigi Zingales observes, the declining importance of physical assets relative to human capital has changed this. Physical assets, "which used to be the major source of rents, have become less unique and are not commanding large rents anymore." And "the demand for process innovation and quality improvement… can only be generated by talented employees," which increases the importance of human capital.48 This is even more true since Zingales wrote, with the rise of what has been variously called the Wikified firm, the hyperlinked organization, Enterprise 2.0, etc.

[11] Ibid., p. 89.
[12] Ibid., p. 95.

in chemical industry came from German firms, and were never worked in the U.S. As a result the American chemical industry was technically second-rate, largely limited to final processing of intermediate goods imported from Germany. Attorney General A. Mitchell Palmer, as "Alien Property Custodian" during the war, held the patents in trust and licensed 735 of them to American firms; Du Pont alone received three hundred.[9]

More generally, "intellectual property" is an effective tool for cartelizing markets in industry at large. They were used in the automobile and steel industries among others, according to Noble.[10] In a 1906 article, mechanical engineer and patent lawyer Edwin Prindle described patents as "the best and most effective means of controlling competition."

> Patents are the only legal form of absolute monopoly. In a recent court decision the court said, "within his domain, the patentee is czar.... cries of restraint of trade and impairment of the freedom of sales are unavailing, because for the promotion of the useful arts the constitution and statutes authorize this very monopoly."
>
> The power which a patentee has to dictate the conditions under which his monopoly may be exercised has been used to form trade agreements throughout practically entire industries, and if the purpose of the combination is primarily to secure benefit from the patent monopoly, the combination is legitimate. Under such combinations there can be effective agreements as to prices to be maintained...; the output for each member of the combination can be specified and enforced... and many other benefits which were sought to be secured by trade combinations made by simple agreements can

[9] Ibid., p. 16.
[10] Ibid., p. 91.

II. Privilege as Economic Irrationality

Artificial property rights create irrationality by holding productive resources out of use and creating maldistribution of purchasing power.

In the 1830s Thomas Hodgskin, writing in *The Natural and Artificial Right of Property Contrasted*, noted the effect of artificial property rights in land in holding productive land out of use and denying opportunities to labor. When land is made artificially scarce to labor by political appropriation of land, so that land owners are able to hold vacant and unimproved land out of use, the landlord will not allow it to come into use unless is is productive enough to support not only the laborer himself but also the rentier. Projects like the draining of marshes and cultivation of waste land, if homesteading were free, would have amply repaid the laborer for his own labor, were not undertaken because labor sufficient to support the laborer and his family in comfort could not "obtain from them a sufficiency to pay profit, tithes, rent, and taxes."[1]

"Intellectual property," likewise, enables the owner to hold productive techniques out of use unless the would-be user is able to use them productively enough to provide an acceptable return to the patent or copyright holder, in addition to himself.

[1] Hodgskin, "Letter the Eighth: Evils of the Artificial Right of Property," *The Natural and Artificial Right of Property Contrasted. A Series of Letters, addressed without permission to H. Brougham, Esq. M.P. F.R.S.* (London: B. Steil, 1832).
<oll.libertyfund.org>

And as we shall see below, "intellectual property" is responsible for a phenomenon Tom Peters celebrated: the growing portion of the price of goods comprised of "intellect" and "ephemera." This is part of a larger phenomenon, by which artificial scarcities, rents on artificial property rights, and the inflated overhead costs imposed those things and by other licensing and regulatory schemes, together erect barriers between effort and subsistence.

By simultaneously increasing the threshold of labor required for comfortable subsistence, and enabling the owners of artificial property rights to derive unearned rentier incomes unrelated to any legitimate effort, "intellectual property" divorces effort from consumption and creates a maldistribution of purchasing power. Regardless of one's views of the operation of Say's Law in a free market, it is clear that maldistribution of purchasing power is a very real problem under state capitalism. Hodgskin anticipated this phenomenon almost a century before J.A. Hobson or Keynes.

> The wants of individuals which labour is intended to gratify, are the natural guide to their exertions. The instant they are compelled to labour for others, this guide forsakes them, and their exertions are dictated by the greed and avarice, and false hopes of their masters. The wants springing from our organization, and accompanying the power to labour, being created by the same hand which creates and fashions the whole universe, including the course of the seasons, and what the earth brings forth, it is fair to suppose that they would at all times guide the exertions of the labourer, so as fully to ensure a supply of necessaries and conveniences, and nothing more. They have, as it were, a prototype in nature, agreeing with other phenomena, but the avarice and greed of masters have no such prototype.... By this system the hand is dissevered from the mouth, and labour is put in

with all the auxiliary protection that was possible." For example, the company in 1900 purchased Michael Pupin's patent on loading coils and in 1907 acquired exclusive domestic rights for Cooper-Hewitt's patents on the mercury-arc repeater — essential technologies underlying AT&T's monopoly on long-distance telephony.[7]

By the time the FCC was formed in 1935, the Bell System had acquired patents to "some of the most important inventions in telephony and radio," and "through various radio-patent pool agreements in the 1920s... had effectively consolidated its position relative to the other giants in the industry." In so doing, according to an FCC investigation, AT&T had gained control of "the exploitation of potentially competitive and emerging forms of communication" and "pre-empt[ed] for itself new frontiers of technology for exploitation in the future...."[8]

The radio-patent pools included AT&T, GE and Westinghouse, RCA (itself formed as a subsidiary of GE after the latter acquired American Marconi), and American Marconi.43 Alfred Chandler's history of the origins of the consumer electronics industry is little more than an extended account of which patents were held, and subsequently acquired, by which companies. This should give us some indication, by the way, of what he meant by "organizational capability," a term of his that will come under more scrutiny in the next chapter. In an age where the required capital outlays for actual physical plant and equipment are rapidly diminishing in many forms of manufacturing, one of the chief functions of "intellectual property" is to create artificial "comparative advantage" by giving a particular firm a monopoly on technologies and techniques, and prevent their diffusion throughout the market.

The American chemical industry, in its modern form, was made possible by the Justice Department's seizure of German chemical patents in WWI. Until the war, some 98% of patent applications

[7] Ibid., p. 91.
[8] Ibid., p. 92.

motion to gratify vanity and ambition, not the natural wants of animal existence. When we look at the commercial history of our country, and see the false hopes of our merchants and manufacturers leading to periodical commercial convulsions, we are compelled to conclude, that they have not the same source as the regular and harmonious external world.[2]

[2] Hodgskin, *The Natural and Artificial Right of Property Contrasted. A Series of Letters, addressed without permission to H. Brougham, Esq. M.P. F.R.S.* (London: B. Steil, 1832). Online Library of Liberty <oll.libertyfund.org

department, whose business was entirely to study the question of patents that came out with a view to acquiring them, because… we recognized that if we did not control these devices, somebody else would.[4]

This approach strengthened the company's position of control over the market not only during the seventeen year period of the main patents, but (as Frederick Fish put it in an address to the American Institute of Electrical Engineers) during the subsequent seventeen years of

> each and every one of the patents taken out on subsidiary methods and devices invented during the progress of commercial development. [Therefore] one of the first steps taken was to organize a corps of inventive engineers to perfect and improve the telephone system in all directions …that by securing accessory inventions, possession of the field might be retained as far as possible and for as long a time as possible.[5]

This method, preemptive occupation of the market through strategic patent acquisition and control, was also used by GE and Westinghouse.

Even with the intensified competition resulting from the expiration of the original Bell patents in 1894, and before government favoritism in the grants of rights-of-way and regulated monopoly status, the legacy effect of AT&T's control of the secondary patents was sufficient to secure them half the telephone market thirteen years later, in 1907.[6] AT&T, anticipating the expiration of its original patents, had (to quote Vail again) "surrounded the business

[4] Ibid., pp. 11–12.
[5] Ibid., p. 12.
[6] Ibid., p. 12.

III. "Intellectual Property" and the Structure of the American Domestic Economy

Patents promoted the stable control of markets by oligopoly firms through the control, exchange and pooling of patents.

According to David Noble, two essentially new science-based industries (those that "grew out of the soil of scientific rather than traditional craft knowledge") emerged in the late 19th century: the electrical and chemical industries.[1]

In the electric industry, General Electric had its origins first in a merger between Edison Electric (which controlled all of Edison's electrical patents) and the Sprague Electric Railway and Motor Company, and then in an 1892 merger between Edison General Electric and Thomas-Houston — both of them motivated primarily by patent considerations. In the latter case, in particular, Edison General Electric and Thomas-Houston each needed patents owned by the others and could not "develop lighting, railway or power equipment without fear of infringement suits and injunctions."[2] From the 1890s on, the electrical industry was dominated by two large firms: GE and Westinghouse, both of which owed their market shares largely to patent control. In addition to the patents which they originally owned, they acquired control over patents (and hence over much of the electrical manufacturing market)

[1] David F. Noble, *America by Design: Science, Technology, and the Rise of Corporate Capitalism* (New York: Alfred A. Knopf, 1977), p. 5.

[2] Ibid., p. 9.

through "acquisition of the patent rights of individual inventors, acquisition of competing firms, mergers with competitors, and the systematic and strategic development of their own patentable inventions. As GE and Westinghouse together secured a deadlock on the electrical industry through patent acquisition, competition between them became increasingly intense and disruptive. By 1896 the litigation cost from some three hundred pending patent suits was enormous, and the two companies agreed to form a joint Board of Patent Control. General Electric and Westinghouse pooled their patents, with GE handling 62.5% of the combined business.[3]

The structure of the telephone industry had similar origins, with the Bell Patent Association forming "the nucleus of the first Bell industrial organization" (and eventually of AT&T) The National Bell Telephone Company, from the 1880s on, fought vigorously to "occupy the field" (in the words of general manager Theodore N. Vail) through patent control. As Vail described the process, the company surrounded itself

> with everything that would protect the business, that is the knowledge of the business, all the auxiliary apparatus; a thousand and one little patents and inventions with which to do the business which was necessary, that is what we wanted to control and get possession of.

To achieve this, the company early on established an engineering department

> whose business it was to study the patents, study the development and study these devices that either were originated by our own people or came in to us from the outside. Then early in 1879 we started our patent

[3] Ibid., pp. 9–10.