LESSONS FROM THE DIGITAL CRISIS IN COPYRIGHT: ETHICAL AND POLITICAL IMPLICATIONS OF RADICAL AUTOMATION

By

Dylan Eric Suzanne

Dissertation

Submitted to the Faculty of the

Graduate School of Vanderbilt University

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Philosophy

August, 2006

Nashville, Tennessee

Approved:

Professor John Lachs

Professor John J. Stuhr

Professor Gregg M. Horowitz

Professor Robert B. Talisse

Professor Carl Mitcham

TABLE OF CONTENTS

LIST OF FIGURES

PREFACE

It is somewhat difficult at this time to write critically about intellectual property. One risks being repetitive, for many excellent works critical of intellectual property legislation are already available, such as Lawrence Lessig's *Free Culture*, Siva Vaidhyanatha's *Copyrights and Copywrongs*, and Michael Perelman's *Steal this Idea*. In addition to the risk of repetition, other problems are presented by comparative lack of thoughtful and well-argued works in defense of current copyright legislation, and thus one risks sounding as if one is being unfair to the position one argues against. Third, the circumstances in which this debate has become important – the shifting landscape caused by our continuing technological progress – puts any policy debate on unstable footing from the outset.

These are problems that very much circumscribe my project in this work. First, rather than repeat the work already done, I intend only to cover ground which I feel has been inadequately addressed. Second, rather than depending upon the typically inadequate arguments that the opposition has made, I investigate the grounds by which their best arguments might be made. Third, rather than simply discussing shifting policies, I discuss the shifts in technology which will necessitate shifting public policy. It remains then to be said, first, what here needs yet to be articulated, second, what best grounds upon which copyright legislation might be grounded, and third, what technological shift(s) might properly be said to underlie the current ever increasing need for change in our copyright laws.

To address these three points in more detail: first, I intend this work to address copyright from ethical and ontological perspectives, as distinct from economic, cultural,

legal, or socio-political perspectives – these perspectives are already well represented in the current literature, and to represent these perspectives, I feel I cannot do better than to recommend the works of the three authors mentioned above. I will not neglect to discuss other perspectives when germane, but my primary purpose here is to investigate copyright law from the distinctively philosophical perspectives of ethical theory and (modest) ontology. The primary perspective that I use in this project is an interpretive schema with serious implications for both the ethics and the ontology of technology: Marxism. A Marxist interpretation of the current crisis in copyright law is rather uniquely able to provide a foundation for a critical examination in both of the perspectives with which I am here concerned, and, furthermore, is a perspective on intellectual property which is largely unexplored and to the best of my knowledge only represented in the work of Michael Perelman.

The views put forth in the following also differ from those already published in the special weight placed upon the technological innovations at issue. I certainly agree that – as Lessig argues – our current woes would not be as they are without a legal history of repression going back to industrial reactions against VCRs, FM radio, and phonograph recording. Our current crisis in copyright is, however, intimately tied to the particular innovations of digital technologies, and while concentrating first and foremost upon this aspect of the current crisis does limit our view, it reveals the vast importance of digital technologies and the scope of what can be tied to these innovations is a testament to their fundamental importance.

Second – and, obviously, in reference only to the ethical branch of this project – I shall respond to the pro-copyright opposition by appeal to the best position that I can assemble for them from the ethical theories most obviously valuable to their cause. A

utilitarian grounding with a strong economic emphasis is most commonly used by pro-copyright arguments, and this is indeed their strongest ground, although even here I believe that a strong pro-copyright position can only be supported by an incomplete and biased argument. Thus, here I will argue that a utilitarian consideration supports a radical weakening or elimination of copyright law, while admitting that there will certainly still be heavy costs incurred by this change.

Supplemental support for the anti-copy position is sometimes sought in Kantian and Lockean theories. Rather than to simply address these arguments in the vague and insufficient forms in which they have been made, we will take the time to assemble the best possible case that can be made on their basis. As we will see, this best possible case is still quite poor, and both theories clearly offer more support for the abolition of contemporary American-style copyright law. Thus, overall, in the ethical branch of this project I will argue on these four separate bases – first Marxist, then utilitarian, and then Kantian and Lockean – that current copyright law cannot be justified.

Third – and, obviously, in reference only to the ontological branch of this project – I shall argue that the technological shift that underlies the current crisis in copyright law is nothing but a later stage in the same process of automation that brought about the industrial revolution. Many have already made connections between the industrial age and our so-called "Information Age," drawing a parallel between the industrial revolution and the shift to the information economy of which so much has been made. I will contribute to this talk of parallels only accidentally: I do not view the current changes as a parallel event at all, but rather as a different set of social forces emerging from the very same process. Automation once brought about consolidation of the means of production through the economics of scale, leading to the industrial revolution. As automation

continues, and as the means of production in terms of both variable and constant capital are thus cheapened, a kind of phase transition takes place. Where concentrated capital was once able to dominate dispersed capital, now independent individuals and small groups are able to wield productive power rivaling any concentration of capital.

In order to show that the technological shift which has brought about the crisis in copyright is not merely one idiosyncratic to digital media, I will discuss analogical movements in the development of technology in other fields, developing in particular a analogy with the technological progression of martial technologies.[1] While this presentation of analogical development is certainly insufficient to establish that the ontological analysis is applicable to technological progression – or even more specifically the process of automation – in general, it should at least be sufficient to demonstrate that the regional ontology is one which applies to digital and martial technologies *qua* automation. This analogical development also gives us a broader perspective on the changes we see today in digital media and digital rights management. As we will see, the changes presented by this technological shift are quite striking when viewed in their abstract form, that is, when viewed as a structural change in social conditions of production rather than merely as "piracy:" the last shall be first, and automation has begun to become liberational, to our great joy, amazement, and – when we see this change in the area of martial technologies – horror as well.

Overall, my goal here is threefold: first, I intend to provide a useful, illuminating, and novel perspective on the current crisis in copyright; second, I intend to provide

[1] I use the term "martial" rather than "military" in order to emphasize the functional equivalence between state based and non-state based violent organizations; "military" comes from the Latin "miles," meaning "soldier," which implies a trained and organized professional or semi-professional warrior, and thus marginalizes the insurgent and the terrorist.

counterarguments to the anti-copy perspectives which currently are in play, and to which my perspective is in opposition; and third, I intend to provide a few first steps towards an ontology of technology, similar in mood to that which Marx provided, and, indeed, based upon his work as well as that of Marcuse and Dewey. Contained within these goals, or at least within the first and the last, is another less explicit goal: I intend to carry the spirit of Marx's inquiry to a very few of today's concerns, to make more clear what his views might have been, should he have lived to see digital technology reach its current state – to stand in his shadow in such a way that one of the edges of its penumbra is sharpened and defined at least a bit by my own, much smaller, but much closer, silhouette.

This brings up a final but crucial prefacatory note: I must make clear in exactly what way my analysis is a Marxist analysis, for, while I do intend to follow the spirit and to some extent the structure and content of Marx's inquiry, this work is certainly not a standard "party-line" Marxist work. Lawrence Becker, in the introduction to *Property Rights: Philosophical Foundations*, summarizes what he sees as the two polarized perspectives in property rights as follows:

> Thoroughgoing libertarians are willing to tolerate nearly any resultant distribution of goods in order to preserve the liberties of a social order based on private ownership. Socialists are willing to restrict or eliminate almost any form of private ownership in order to achieve justice in distribution.[2]

Were I simply to argue that, from a Marxist perspective, justice in distribution must take precedence over private ownership within the realm of intellectual property, this would be no surprise, for this is indeed the position of thoroughgoing socialists with regard to property in general. It would also not be of any great interest, for the argument would

[2] Becker, Lawrence. *Property Rights: Philosophical Foundations.* Pg. 1.

simply be that (1) socialism is justified with relation to property in general, that (2) intellectual property is properly a subset of property in general, and that (3) therefore, socialism is justified in relation to intellectual property. Happily, this is not my argument.

I do not hold that the Marxist perspective is correct and correctly applied to intellectual property, for I abandon the first claim. I hold, instead, that Marxism is correctly applied to intellectual property of digital media in particular, due to a structure inherent within digital media. That is to say, I am not defending Marxism in general, but only within the scope of the regional ontology of digital media. In this, I mean to argue even to those who believe Marxism to be a foolish or ill-founded doctrine that it is appropriate and just within the realm of property rights held over digital goods, even if it should fall in all other applications.

Hence, I do not argue that Marxism is right, and thus that we should bring about revolution within digital political economies, just as we ought in the general political economy, but instead, I argue that Marxism must be right with regard to property over digital media – and perhaps over digital media alone – for digital media has itself become revolutionary, independent of any intentional action towards that aim on the part of content creators, users, or even the authors of our IT architectures. Thus, in my initial Marxist analysis I argue that digital technology, through its development within communications technology, has undermined the possibility of commodification, even in the absence of a political movement towards this end. However, I cannot prove that Marxism is necessarily the best possible way of understanding digital objects, and this brings up the question of whether, by choosing the Marxist perspective to provide the primary analysis upon which my own argument is constructed, I have simply begged the

question. In order to avoid this appearance of circularity, I argue that (1) the structure of digital objects makes them unusually and seemingly uniquely well-suited to the Marxist perspective, and that (2) the viewpoint which emerges from a Marxist assessment of this analysis is at least consonant with a considered reexamination of intellectual property over digital objects emerging from the most traditional foundations of intellectual property rights.

Specifically, to demonstrate that the outcome of the Marxist assessment is not merely the result of the Marxist analysis which preceded it, I argue that the traditional foundations of intellectual property rights come to similar or identical conclusions, once we consider the technological structure which the Marxist analysis brought to light, even when we consider them outside of a Marxist viewpoint. I address the three primary philosophical foundations of intellectual property rights within current literature: utilitarianism, Kantianism, and the Lockean labour-desert theory. Once we have considered that structure of digital media that in the Marxist analysis was called "revolutionary," we find that these traditional and typical justifications do not apply in any straightforward way to property rights over digital objects. On the contrary, rather than supporting intellectual property rights over digital objects, we find these perspectives to instead assess such rights as unnecessary (utilitarianism), unwarranted (Kant), or unconscionable (Locke). In this way I hope to show the reader that, even if they do not agree with my analysis suggesting that Marxism is the best window into the implications of digital media for intellectual property, the conclusions reached by hewing instead to one of these three primary foundations of intellectual property will be at least consonant, if not in full agreement, with the conclusions put forth by the Marxist viewpoint. Thus, the ultimate basis and justification of my ethical assessment is not

merely Marxist, but rests upon four bases: not only Marx, but also Mill and Bentham, Kant, and Locke.

Thus, in a variety of ways, my argument is not a Marxist argument, but rather an argument that is emerges from a Marxist analysis. The analysis is Marxist in this sense: I use Marx's concepts in order to explain and give structure to the nature of digital media. I do not intend, at any point, to depend upon the reader's belief in Marx's wisdom or veracity, and, thus, I put together my argument in such a way that I do not depend on any of the suspect general Marxist doctrines, instead arguing in each case that, regardless of its general truth, the concepts my view depends upon are correctly applied to digital media and perhaps digital media alone. Thus, for example: (1) I do not argue, assert, or assume that the labour theory of value is correct, but hold only that it is a useful and accurate description of digital media, (2) I do not depend upon any conception of technological determinism, but simply argue that those effects of technological determinism which Marxism would predict have in fact come to pass within the realm of digital media, and (3) I do not hold that capital leads directly to revolution against capitalism through the tendency of the rate of profit to fall, but instead assert simply that capital as it appears in digital media has *in fact* undermined its own foundations, giving rise to an actually existing spontaneous communist community. My analysis, then, is Marxist in that it utilizes and defends the propriety of Marxist terminology within a limited purview, but it is not meant to be an analysis with Marxist goals, methods, conclusions, or foundations. To rephrase this in a final, slightly different way: my work here is a "Marxist analysis of digital media" not in that it is an analysis of digital media which happens to be carried out from a Marxist perspective, but rather an analysis of digital media which shows that digital media itself *calls for* a Marxist perspective.

The presentation of my argument in the following is, roughly, analytic in form. In order to provide additional clarity, I will briefly present the argument in synthetic form.

I. Ethical Consideration:

Justifications for copyright are based upon either (a) legal and constitutional rights, (b) natural rights of authors, or (c) based upon purely economic and utilitarian concerns.

(a) The U.S. Constitution allows Congress to grant copyright protection in order to encourage progress of science and the "useful arts." I argue that when we consider copyright with regard to digital media in a culture when the means of production of digital media are widespread, generally available, and able to produce goods of comparable quality to the means of production of digital media used by industry,

1. The enforcement of copyright requires infringing upon other more fundamental rights of the public,
2. Copyright protection no longer encourages, but in fact discourages, the progress of science and the "useful arts," and
3. Congressional response to changes in the means of production of intellectual goods has wrought laws which are clearly against the intention of constitutional protection of copyright, and which extend the rights of capitalist interests against the public rather than vice versa.

For these reasons, I hold that constitutional considerations justify the lessening of copyright protection, and are insufficient to justify current copyright law as exemplified by the DMCA, CTEA, and NET acts.

(b) A natural right of authors over their intellectual products is recognized by many, usually on the basis of the work of either John Locke of Immanuel Kant. I argue that when we consider copyright with regard to digital media in a culture when the means of production of digital media are widespread, generally available, and able to produce goods of comparable quality to the means of production of digital media used by industry,

1. Competing natural rights of the public are of a more fundamental and consequential importance on a Lockean basis than the rights of the author with which they are now at odds, and furthermore,
2. The basis on which a Lockean natural right of authors over their works has been eroded by the progress of the means of production of intellectual goods, and
3. Competing natural rights of the public are of a more fundamental and consequential importance on a Kantian basis than the rights of the author with which they are now at odds, and furthermore,
4. The basis on which a Kantian natural right of authors over their works has been eroded by the progress of the means of production of intellectual goods.

For these reasons, I hold that considerations of natural rights justify the lessening of copyright protection, and are insufficient to justify current copyright law as exemplified by the DMCA, CTEA, and NET acts.

(c) On a purely economic or utilitarian basis, it may be argued either that copyright production brings economic or cultural prosperity, or that the radical lessening of copyright protection would bring economic or cultural ruin. I argue that when we consider copyright with regard to digital media in a culture when the means of production of digital media are widespread, generally available, and able to produce goods of comparable quality to the means of production of digital media used by industry,

1. Economies based upon denying the public free use of means of production which are available to them are inefficient, as they amount to governmental subsidization of production which would be accomplished at least as well in the absence of such subsidization,
2. The utility of the intellectual goods produced under a profit motive is less than that of those intellectual goods which would be produced in the absence of the restrictions necessary to provide the profit motive,
3. Economies which are not in conflict with open-sourcing and copylefting are more sustainable, and provide substantial and widespread business opportunities, even if they are less profitable than those based upon strong copyright protection, and
4. Those intellectual goods for which there is insufficient non-market or service-based motive to create represent an acceptable cultural loss,

either because they are of little cultural value or because their future production under the current copyright scheme was already at risk as substantially as under a weakened copyright system.

For these reasons, I hold that purely economic and utilitarian considerations justify the lessening of copyright protection, and are insufficient to justify current copyright law as exemplified by the DMCA, CTEA, and NET acts.

II. Ontological consideration:

If, as I argued in the ethical consideration, the technological progression of information technology has undermined the justification of a certain kind of right, we may inquire what the nature of this technological shift is such that it would effect this change in our ethical judgments. This shift has to do with (a) a kind of automation, which ultimately brings about (b) a monadization of power.

(a) The automation which has taken place in the development of digital technologies is one in which

1. The process of automation becomes radical and liberational, in that the intentionality embodied within the technology becomes the accidental externalities of human action rather than being the proper means of human action, as is the case in less advanced stages of automation, and
2. Economies of scale are neutralized such that decisive action in a directly or indirectly competitive enterprise can now be as easily taken by any party having access to radical automation.

For these reasons, I hold that radical or liberational automation leads to a restructuring of power relations in actions dependent upon technological

processes that have been thus automated, leading to what I call a monadization of power.

(b) The monadization of power represents a revolutionary restructuring of human relations wherein

1. Those in power are left three general avenues of resistance, to either (α) exclude those without access to radical automation from gaining such access, (β) prevent those with access to radical automation from free use of the means already within their possession, and/or (γ) to generally attempt to institute a caste system based upon ability to use radical automation, and
2. The appropriate response is to ensure that any resistance to the restructuring which the monadization of power tends to bring about is (α') sustainable, (β') justifiable, and (γ') built upon an equal recognition of the rights of those with and those without access to radical automation.

For these reasons, I hold that the monadization of power brings threats, both from oppressive resistance to shifting power structures and from opportunistic abuse of shifting power structures, but that it brings opportunity as well as threat, and that it is possible for us to formulate policy which allows for the changed power structures brought about in this monadization to be both rational and ethical.

NOTE ON METHOD

I have noted that there is a persistent problem in writing critically about tendencies in concrete events, especially those that are currently in flux and those that are not normally viewed as being part of a larger systematic pattern. One must demonstrate both that there is a pattern to be discussed as well as arguing that the proper view of this alleged pattern is the one being put forth.

These projects are in tension with one another. By emphasizing too strongly the argument about the nature of the pattern one tends to look as if one is cherry-picking examples. By emphasizing too strongly the particular examples one can very easily fail to convey the larger argument about the nature of the pattern and trend of these particulars.

The style of presentation which I have settled upon is one which I will not defend as the generally best or most balanced way of dealing with this, but which I will defend as the style most appropriate for my goals and for the place of this work within the ongoing debate. As a philosopher – not a lawyer, not an economist, and not a journalist, but a philosopher – I felt it appropriate that I seize the former horn of this dilemma, emphasizing the nature of the pattern more than attempting to establish beyond doubt that such a pattern, in fact, exists, and hold on as best I can.

In my attempt to articulate first and foremost the larger argument, I have still used a great number of particular examples, but they have been almost entirely shunted off into footnotes. In this format, they serve within this work as support for my claims of matter of fact – claims which form the basis for my larger argument – but do not as serve well as they otherwise might as arguments for the truth of these claims about matters of

fact. This choice has a number of inherent flaws, which I have of course attempted to abrogate, but which I will not pretend to have overcome. First, I risk the appearance of casuistry to those who have not already been following recent developments in intellectual property law and enforcement. Thus, those who have never frequented slashdot or GrepLaw may find crucial parts of this work to more closely resemble imaginary or ideological construction and idle speculation than argument and analysis. Second, my case is much less likely to sway those who have already made up their minds about the propriety of intellectual property rights. Given that these flaws are ones which I feel I cannot entirely counteract, and which I have accepted as the lesser of evils, I must admit that this work does not effectively present arguments that there are problems with copyright law and enforcement as much as arguments about the form, consequences, and proper response to these problems, which will no doubt have a strong claim only to those who already recognize that such problems are real and serious.

I feel this choice and in a certain way the flaws bundled with it are appropriate for this work. I am by no means the first to write on the current crisis in copyright, and to pretend to start from scratch would be in a certain sense disrespectful of all the fine work already done, which I would have to either summarize or recreate. Such a project would unfairly and inappropriately disdain the work of others who, as they are lawyers, economists and journalists, are certainly both more able and more authoritative voices on these fundamental matters. As a philosopher, and as someone entering this debate after its basic frame has already been well constructed, I think it right and proper that I concentrate my efforts on more esoteric argumentation, even though it reduces my audience to the initiated.

I might note as well that I enjoy the style of presentation chosen for a couple of less important and more self-indulgent reasons: I feel it mirrors the style of Marx in *Kapital*, and that it also represents a kind of hypertextual prose. As Gregg Horowitz made clear to me in my first thorough study of the text, Marx's writing in *Kapital* presents in its body an argument comparably scientific and detached as that of his bourgeois economist contemporaries, and yet, through his extensive use of footnotes, he nevertheless includes the human struggle and the death, bloodshed, and privation which an academic discussion threatens to obscure and disrespect. I hope that my use of footnotes serves a similar purpose, although the human struggle in intellectual property certainly has lower stakes and has involved a human struggle which to my knowledge has never brought about death or bloodshed, but only creative repression, cultural bankruptcy, and economic ruin.

This method also represents a kind of hypertextual prose. Through my use of footnotes, I am able to present my argument with a kind of continuity, confident that the reader can stop to look at related references to particular phrases and particular claims, able then to return to the argument being made in its whole form. I hope that this work in its static form might still retain some of the formal virtues of hypertext.

Relatedly, I feel I owe the reader an explanation of the extreme length of many of my footnotes. The reasoning behind this cumbersome and often distracting stylistic choice is related to similar elements of ancient philosophy. Many of the ancients wrote extensively, and yet their writings did not survive to the modern day intact. Indeed, there are many ancient philosophers whose work we know only through extended excerpts provided in the work of later commentators, as, for example, Epicurus' work was preserved through the commentary of Lucretius and Cicero, or the way in which

Aristotle's criticism preserved much pre-Socratic thought which would otherwise be lost to us. Similarly, I have used extended extracts of webpage sources in order that the reader should be able to view a fuller context in which remarks were made without being dependent upon the stable existence and accessibility of webpages, which, of course, are subject to destruction on a far smaller time scale than the writings of the ancients ever were. I have used large extracts with the knowledge that these ephemeral sources might otherwise be lost entirely, and, while they may not be of lasting cultural value, they are at least preserved for those who wish to see the discussion which was going on at the time at which this work was written.

Should the reader wish to attempt to track down the original web pages to which I have referred, I would advise first to attempt to use the URL provided in a standard web browser. If this fails, the reader may be able to access the source through the "WayBack Machine" available at archive.org. Failing that, I have at least provided significant excerpts in the footnotes of this work.

Finally, a note should be made about the international nature of the current crisis in copyright. While a good deal of the crisis is emergent from widespread domestic infringement and the continued increasing social acceptability of such infringement,[3] a very significant element in the current crisis is infringement abroad. Social attitudes are

---

[3] Cf. e.g. these findings from a study by the Pew Charitable Trusts:

"In the six months between August 2000 and February 2001, music downloading became an increasingly regular activity for Internet users. The number of adult American Internet users downloading music on any given day doubled to more than 6 million. That is twice the number of Internet users buying retail products online on any given day and equal to the number seeking health information on the Web or looking for travel information.

"The striking growth of the music downloading population occurred across virtually every demographic group and level of online experience. It was pronounced among the very freshest newcomers to the Internet as well as the most experienced online veterans. The increase in the number of music downloaders also occurred among online men and women, the well-to-do and those in modest economic circumstances, and in different racial and ethnic groups, particularly among Hispanics." (Pew Charitable Trusts. *Grantee Publications: The Music Downloading Deluge*. Apr. 2001 <http://www.pewtrusts.com/pubs/pubs_item.cfm?content_item_id=409&content_type_id=8&page=p1>)

much less accepting of strong, American-style copyright protection in other nations, most particularly in East Asia,[4] and this represents a serious barrier to effective protection to ownership interests in intellectual property. In my argument in the following, I will note international effects in passing, but will concentrate almost exclusively upon U.S. interests and U.S. policies. This is justified for a couple reasons. First, the U.S. is the motivating force behind the kind of strong copyright laws that I am here arguing against, and, thus, is the proper target of my argument. Secondly, the U.S. economy is among the most heavily invested – or perhaps the single most invested – in production of copyright protected products, and, thus, has the most at stake, and is for this reason of most importance when considering the economic effects of changes in copyright law. The crisis in copyright protection is an American one, both in origin and in effect.

[4] Cf. e.g. Swinyard, W.R. et al "The Morality of Software Piracy: A Cross-Cultural Analysis:"

"Though software piracy is a troublesome issue in every corner of the globe, the popular press has singled out Asia for particular condemnation. Articles in the U.S. computer press often comment with disdain about Hong Kong's "Golden Arcade", Singapore's "Funan Center" and "People's park," or Taipei's "Computer Alley" – retail outlets where the computer shopper can buy pirated copies of virtually any copyrighted software for little more than costs of a blank disk . . . The illegal sales from these outlets are impossible to measure. Lotus Development Corporation believes that software piracy from Taiwan alone cost them lost sales of US$200 million annually . . . In a single 1986 raid on one Hong Kong shopping arcade US$130,000 worth of pirated software was confiscated . . . The shops stop making and selling pirate copies for only a few hours after such raids." (pg. 279)

"While Asians seem to have a more casual attitude than Americans toward software piracy, those in the West must understand that it is not simple lawbreaking we are dealing with. Copyright and other protection legislation goes firmly against the grain of Asian culture, which supports the concept of sharing, not protecting, individual creative work. One should not expect Asians to quickly support copyright legislation nor to immediately embrace it in their attitudes or behavior." (pg. 289)

(Swinyard, W.R., H. Rinne and A. Keng Kau. "The Morality of Software Piracy: A Cross-Cultural Analysis," in *Computers and Ethics in the Cyberage*. D. Micah Hester and Paul J. Ford, eds.)

INTRODUCTION

Although details regarding copyright law are given throughout the work, I will provide here a brief introduction to the history and purpose of copyright law, and intellectual property rights in general, in order that readers not intimately familiar with the issues at play will not be plunged headlong into the debate without at least a brief survey ready to hand. This brief introduction is also intended to make clear the way in which differing forms of intellectual property are related to technological and economic progress, and to show why the justification of copyright is especially tenuous given recent technological innovation, and, thus, why it, rather than other intellectual property rights, is in a state of crisis.

It should be noted that the following characterization of these different categories of intellectual property is rather different from the legal definition. My intent here is to simply provide an overview of the economic and social intent of these protections; the legal distinctions will be discussed as we approach issues in greater depth. These definitions should serve, however, to show rather more clearly than legal definitions would why copyright is a far more contentious protection than other intellectual property rights: as I will argue at length later, when the public is able to make their own copies of the products being sold to them, the imposition of artificial scarcity which protects businesses' ability to profit from denying the use of publicly available means of production seems difficult to justify.

Intellectual property rights fall into three basic categories: copyright, patent, and trademark. All three represent a governmentally enforced monopoly, which allows persons and corporations to enjoy a kind of artificial scarcity in the marketplace. This

has historically allowed for a more stable and fecund business environment where commerce is dependent upon the industrial use of intellectual goods, where we can define "intellectual goods" descriptively as those which hold the majority of their value in their ideal content, and functionally as those whose marginal cost of reproduction is negligible when compared to the cost of first production.

Trademark, the simplest of the three categories of intellectual property, allows a business or individual to retain exclusive use of certain expressions, images, or symbols in order to establish brand identity. By allowing businesses or individuals to control intellectual goods, such as Coca-Cola's ownership of a particular shade of red, or the singer Michael Jackson's ownership of uses of the name such as the URL michaeljackson.com, the public is better able to distinguish when goods are being manufactured by a known source rather than others who might otherwise capitalize on the reputation of an established producer of goods, and producers are able to ensure that their reputation is not besmirched by deceptive marketing, and, additionally, are able to cement the quality of endorsed or subsidiary goods through association with the distinctive symbols of the brand name, such as the Nike "swoosh." The monopoly over these intellectual goods is entirely artificial: there is no actual barrier preventing the use of these intellectual goods, and the cost of manufacturing a matching and thus infringing color, symbol, or name is, of course, virtually nil.

Patent protects processes which are useful to industry, but which are similarly easy to replicate. An innovative manufacturing process may revolutionize an industry, thus bringing benefits to the public in the form of the lessening of production costs, the improvement of the goods produced, or the elimination of environmentally damaging byproducts, but businesses are unlikely to develop such innovations since the

development cost is much larger than the cost which their competition would suffer by adopting the innovation after it has already been successfully implemented in the innovative firm. For this reason, an artificial scarcity is introduced, granting an innovative firm a temporary monopoly by forcing their competitors to act as if they were unable to gain access to the resources necessary to reproduce the innovation, those resources being, of course, nothing more than the ability to understand the industrially useful idea.

Copyright has very much the same structure, except that it protects not a public identity useful to commerce, as with trademark, and not a process useful to industry, as with patent, but instead an intellectual good having value in the marketplace for its own sake. This category of intellectual goods includes such commodified ideas as writings, songs, and software. These goods could not as easily or readily be the basis of an economy without the artificial scarcity which intellectual property rights provide, but when a monopoly right to reproduce these goods is guaranteed by the government, individuals and corporations are able to bring them to market as if they were the regular physical objects of commerce, selling, for example, the right to sing a certain melody in the same way that one might sell the use of a banquet hall, or selling a set of ideas, contained within a book, in the same way as one might sell a chair. This protection first became necessary for industrial commerce in intellectual goods when printing presses became widespread; the Statute of Anne (1710) was passed into English law as a response to the practice of Scottish printers, who would reprint and sell books that English printers had shown to be profitable titles. Obviously, the availability of printing technologies has improved since then, making the threat to those directly trading in intellectual goods ever more dire.

Thus, from its origins, copyright has always been a response to a struggle between established and emerging entrepreneurs. In recent times, however, as the means of production of intellectual goods have become widely available and affordable, this conflict has enlarged its scope from being one between the interests of rival firms to being also one between the interests of cultural industrialists and the public, where we can consider the now contentious interests of the public both with regard to their roles as cultural consumers as well as cultural creators. Cultural industrialists, to maintain their position, need to constrain the abilities of the public to do what they will with the cultural products that the industrialists sell them. This shift in the power struggle that copyright law means to resolve – from private against private interests to private against public – contributes to my use of the term "crisis" to describe the present situation, but it is not itself sufficient to merit the use of the term.

Copyright has been said to be in crisis several times in the past. We may think of Jack Valenti's comparison, in 1983, of the VCR to the Boston Strangler,[5] but an even better example can be found in William Nasri's 1976 text, *Crisis in Copyright*, which worried about how to resolve the "crisis" in copyright presented by photocopying. Nasri states that

> As some publishers put it, the unprecedented technological progress of the last decade harms the environment the way DDT affects wildlife, and if the condition is permitted to continue it may go beyond the point of no return . . . photocopying may destroy the incentive for writing and the economic viability in publication.[6]

[5] Cf. Pg. 2, below.

[6] Nasri, William. *The Crisis in Copyright*. Pg. 14.

As we know now, the threat presented by the photocopier was relatively easily resolved by a new, slightly altered conception of fair use, just as copyright laws have conformed themselves to and tamed prior technological threats, such as the VCR, the cassette recorder, and the phonograph. In using the term "crisis" to describe the current situation, I need to show that the current situation is different in kind from these prior perceived crises.

As my first evidence, consider that recent lawsuits regarding the digital threat to cultural producers have not resolved the issue. Lawsuits have only increased in number on the basis of new legislation responding to digital media, whereas these past perceived crises were resolved to a great degree by legal decisions. I do not expect this evidence to be sufficient, for it may be that our new laws are poorly crafted or incomplete, or that the changing technological field is simply too mutable at the present moment to be dealt with and the conflict of rights under consideration properly resolved. I hold that the difference in kind, however, has to do with the structure of digital media, and that, while these difficulties in legislating and interpreting laws with regard to the shifting technological landscape certainly do make a resolution here problematic, there is, independently, a wholly new challenge to copyright which digital media presents. Digital media, by its nature, works quite directly against copyright restrictions, in that digital objects are already stated in the form of their own reproduction, and that this reproduction is always a lossless reproduction, functionally free from noise introduced through the process of reproduction. I do not expect to establish the fundamental importance and wide effect of these aspects of digital media here – it is the subject most centrally of the first Chapter to follow – but intend here only to explain why I believe the term "crisis" is justly applied: not merely because of the great economic harms which are presented, and not merely

because of the conflict between private and public interests, but also because technological progress seems to have, in a fundamental way, undermined the process by which the artificial rights which copyright institutes can be enforced. All three of these considerations, of course, contribute to the current situation and a crisis, and I will treat all three seriously in the discussion to follow. To me, in fact, the most important is the way in which the great economic stakes, combined with the technological barriers to enforcement, intensify the conflict between public and private interests, leading to ever greater legal threats and limitations being placed over the public considered as either cultural consumers or cultural creators.

My argument is that those industries which deal in intellectual goods no longer have any right to profit from artificial scarcities imposed by copyrights, but should instead move to service-based business models or some other form of non-parasitic commerce. For those who believe that copyright is justified by the 'copyright bargain' outlined in the United States Constitution, a reasonable defense of copyright will argue that the limiting of general use of publicly available means of production allows for those trading in intellectual goods to provide to the public a greater range or quality of content than would otherwise be available. I argue that this is not the case, but regardless this is of an ever lessening importance in comparison to the loss of rights which the imposition of artificial monopolies brings upon the public which now has access to the relevant means of production, which rights are, furthermore, of a more fundamental importance on a constitutional basis, since they are granted fundamentally as citizens' rights whereas copyright is granted by the constitution only as an optional right subject to Congress' will, and which is furthermore granted by the constitution to individuals and which only by Congress' subsequent action – with the courts' approval – has been extended to

corporations. For those who believe copyright is justified by a natural right of authors, a reasonable defense of copyright must show how a theory of authors' rights can be extended to the particular case wherein the author is writing in an age of mechanical reproduction and within a society having widespread availability of the means of production of intellectual goods, something which I argue is impossible using either of the two sources from which the overwhelming majority of authors writing on this topic have attempted to draw such a foundation. Their work instead offers a justification for the lessening of copyright protection given the current state of technological development. Finally, for those who believe copyright is justified by purely economic and utilitarian considerations, a reasonable justification would show that the lessening of copyright law would bring about a lessening of either economic or cultural value. I argue this is not necessarily the case, both because we can already see the emergence of non-commodified intellectual production and open-source business models, and because the current model is wasteful, inefficient, and more easily fixed now than later when copyright based businesses will have destroyed to a greater extent the ability of the public to take over socially necessary intellectual production in order to solidify their eroding artificial monopolies. However, the most fundamental reason why utilitarian considerations support lessening copyright restrictions is simply that there is more human value to be found in being free to create than in being free only to consume.

PART A

ETHICAL CONSIDERATION

As already noted, the primary goal in my ethical consideration of the crisis in copyright will be a Marxist analysis (Chapter 1) and assessment (Chapter 2), both because this consideration leads equally well to the ontological investigation which forms the second part of this project, and because a Marxist perspective on this topic is valuable for its own sake and yet not at this time completed within the literature on this topic. I also hope to provide evidence, admittedly circumstantial, that the Marxist perspective is unusually and perhaps unexpectedly appropriate to digital objects in particular, both by outlining close connections between Marxist concepts and theories and the nature of the digital object, and by showing that other perspectives come to similar conclusions, if they take seriously the particular nature of the digital object.

In putting forth the Marxist case against strong intellectual property rights such as those provided by current U.S. legislation, I certainly will not ignore arguments in favor of such rights from perspectives other than Marxism, and will indeed confront them on their own terms, arguing that the ethical perspectives most relevant to the ongoing debate on this topic – Utilitarian, Kantian, and Lockean – support a radical change in policy when we take seriously the importance of the structure of contemporary digital media.

The majority of cases set forth in defense of strong intellectual property rights fail to take account of the importance of the technological shift now taking place, either through ignorance of the importance of this shift or through a steadfast refusal to consider

the issue negotiable. As an example of how widespread this refusal currently is, consider the September 30, 2003 meeting of the U.S. Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, the title of which was "Privacy and Piracy: the Paradox of Illegal File Sharing on Peer-to-Peer Networks and the Impact of Technology on the Entertainment Industry." The testimony heard in this meeting began with the following statement: "The first point [I have to make] is that downloading copyrighted works is theft, and I think if there is anything else coming out of this hearing other than that, it is a real problem . . . downloading copyrighted works is theft, plain and simple."[4]

Due in large part to this refusal to even admit that intellectual property rights can be legitimately questioned, arguments in defense of strong intellectual property rights are indeed infrequently made at all, question-begging or not. Voices from industry have offered scant justification, but merely assume, usually with a great measure of righteous indignation, that intellectual property rights are sacrosanct, as exemplified by the infamous 1982 quote from Motion Picture Association of America President Jack Valenti's testimony before the Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee on the Judiciary: "I say to you that the VCR is to the American film producer *and the American public* as the Boston strangler is to the woman home alone."[5] Valenti's views have not changed in substance in the time since this questionable analogy was made, and he continues to be the foremost lobbyist on

[4] Sen. Barbara Boxer (D–CA), from hearing transcripts, *Privacy and Piracy*, pgs. 1-2.

[5] Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee on the Judiciary, House of Representatives, Ninety-Seventh Congress. *Home Recording of Copyrighted Works.* U.S. Government Printing Office: Washington. 1983. Available at: <http://cryptome.org/hrcw-hear.htm> Italics added.

behalf of the intellectual property industries and a formidable force in determining the opinions of this nation's lawmakers, despite the fact that his arguments are little more than rhetorically powerful statements that clearly circumvent the protections put in place by the framers of our constitution which have been respected and venerated by our legal tradition until only very recently. For example, he has made a proposal, apparently being taken seriously by at least some of our elected representatives, that Congress might respond to the Constitutional "limited time" requirement for the granting of intellectual property by setting the term of copyright at "forever less one day."[6] In spite of this kind of base disregard of our laws and legal traditions, he continues to be granted the ears of our legislators, and, seemingly, even our Supreme Court Justices. As Lessig noted regarding his experience arguing the *Eldred v. Ashcroft* challenge to the 1998 Sonny Bono Copyright Term Extension Act [henceforth, CTEA], "As I sat down at the table, I saw Jack Valenti sitting in the special section ordinarily reserved for family of the Justices."[7]

When arguments in favor of strong intellectual property rights are actually made they tend to depend upon appeal to our intuitions, either by asking "how would you feel if someone stole your intellectual property?" or by asserting or assuming that no appreciable intellectual products would be created without a strong and long term guarantee of monopoly. I have, however, seen recently increasing use of the *ex post facto* argument, most notably in an MPAA ad campaign, that the erosion of intellectual property rights would increase unemployment. Utilitarian arguments are the only ones

[6] As paraphrased in congressional session, 144 Cong. Rec. H9946, 9951-2 (October 7, 1998). Quoted by Lessig in *Free Culture*, pg. 326fn.

[7] Lessig, Lawrence. *Free Culture*. Pg. 238.

that I have yet seen made which have any serious weight – not surprising, as the legal basis of American copyright law is given on an explicitly utilitarian basis. Nevertheless, given recent technological advances, there is good reason to believe that intellectual products are not dependent upon our current system of copyright, and that the best interests of our society are no longer served by our current copyright system. I argue for this on a utilitarian basis in Chapter 3.

Leaving these arguments aside, we may find some additional potential justifications for current copyright law in texts designed to present general commentary on intellectual property rights. These texts will often point to Locke as the basis for a labor-desert theory of property and Kant or Hegel as the basis of a so-called personality theory of author's rights, in addition to utilitarian concerns, as possible sources for the justification of intellectual property rights.[8] While I have seen no arguments in favor of strong copyright legislation arising from these alternate or supplementary foundations which the authors presented as conclusive or convincing, I have seen this often enough that I felt it valuable to show (in Chapters 4 and 5), in what I feel to be a quite decisive way, that the works of these thinkers most certainly do not support current American-style copyright law.

---

[8] Cf. e.g. *Readings in CyberEthics* (Spinello, Richard A. and Herman T. Tavani, eds.), which makes mention of Lockean and Utilitarian defenses, but does not offer any substantive justification of current copyright laws, articles being either against such justification or assuming their basic legitimacy, *CyberEthics: Morality and Law in Cyberspace*, (Richard A. Spinello: 2000), which states "? Certainly, many theories of property have been put forth, and some of these theories can be used to provide a tenable justification of intellectual property law. Two of the most pertinent justifications can be found in the philosophies of John Locke and G.W.F. Hegel." (Spinello 2000: pg. 78), *Computer and Information Ethics* (Weckert, John and Douglas Adeney: 1997), which makes mention of Lockean and Utilitarian defenses, but does not offer any substantive justification of current copyright laws, and is critical of such justifications, and *Computers and Ethics in the Cyberage* (Hester, D. Micah and Paul J. Ford, eds: 2001), which makes mention of Lockean and Utilitarian defenses, but does not offer any substantive justification of current copyright laws, articles being either against such justification or taking no position on such justification.

I suspect that these general commentaries, written by authors or assembled by editors who are attempting to present the debate in a reasonable way without taking a side on the issue, tend to attribute more weight to defenses from personality and labor-desert theories merely because they seem to be the only available options outside of the standard intuition-based utilitarian arguments. By giving them more weight than they are due, despite that this is intellectually dishonest, they are able to appear even-handed. This anti-copy bias appears "even-handed" due in large part to the great extent to which the pro-copy position has been couched in slander. As an example, consider James V. DeLong's comments at a forum very friendly to debate and criticism, the Annual Technology and Society Conference held by the generally libertarian Cato Institute:

> The number of avowed anarchists [with regard to intellectual property rights] is small, but they seem to me to have many fellow travelers in the academic world, closet anarchists who claim to favor intellectual property, in the abstract, if the rights of creators and the public are properly balanced, but whose policy prescriptions would in pragmatic reality destroy IP as an institution. . . . That such views are found in academia is not surprising. Anyone who deals with issues of rights in tangible property knows that academia generally is permeated by hostility to property rights, usually justified by reference to environmental protection, smart growth, historic preservation, social justice, or some other abstraction.[9]

In response to this rhetoric, as perhaps representative of other comments not as friendly or charitable, I would like to preemptively state that I am not in favor of intellectual

[9] DeLong, James V. "Defending Intellectual Property," in *Copy Fights The Future of Intellectual Property in the Information Age*. Available at: <http://www.cei.org/gencon/027,02368.cfm>

property, but I am in favor of intellectual products and intellectual production, and this, furthermore, is exactly why I am opposed to retaining intellectual property in its current form, given the recent changes in digital media technologies. I, however, reject the label of anarchism; it is my view that to remove governmental protection from an unjust industry does not promote anarchy or chaos, but instead freedom, order, and social stability. Furthermore, my opposition is not based on some "abstraction" such as "social justice." My opposition is based on very concrete social injustices, and I will take care to document the social harms being caused currently and on an ongoing basis by industrial organizations such as the Recording Industry Association of America (RIAA), the Motion Picture Association of America (MPAA), and the Business Software Alliance (BSA), in collusion with governmental bodies worldwide.

Despite the vacuum of strong arguments in favor of our current legislation, it is quite unlikely to change anytime soon. As Nicholas Negroponte wrote, "Copyright law is totally out of date. It is a Gutenberg artifact. Since it is a reactive process, it will probably have to break down completely before it is corrected."[10] Nonetheless, the masses are beginning to rise up against the copyright system. Some filesharers are merely looting, but it is increasingly appropriate to regard the peer-to-peer networks as riots, for many, and increasingly many, recognize their actions as political. Our government ought to recognize the reasonable demands of the public; else the only option will be increasing repression, increasing loss of liberty, and increasing destruction of culture and sociality, which destruction will regardless serve no greater end than the delay of what is unavoidable.

---

[10] Negroponte, Nicholas. *Being Digital.* pg. 58.

Deborah Johnson writes that

> You might try to frame software copying as an act of civil disobedience. . . . To make the case, you would have to show (a) that the system of property rights for software is not just a bad system, but is an unjust system. And you would have to show (b) that adhering to those laws compels you to perform immoral acts or support unjust institutions.[11]

I hope to show in the ethical branch of this project, in these first five chapters, that copying software, games, music, movies and literature is not only defensible on these grounds, but is actually supererogatory. Cooperation with current copyright law is a kind of complicity, and, if my argument should hold, to actively rebel against these laws can be appropriately regarded as laudable.

[11] Johnson, Deborah. *Computer Ethics*. Pg. 164

CHAPTER I

A MARXIST HISTORY OF DIGITAL OBJECTS

The crisis in intellectual property rights has been hidden by its nascent stages. Within the last century, intellectual property rights have been beset by a series of minor technological alterations that have presaged the current crisis. Our current perspective on such property rights tends to be conditioned by the alterations which this social and economic institution underwent with VHS and audiotape, this conditioning being encouraged as much as possible by the efforts of mainstream business in this sector. This perspective has disguised the radicality of the change now taking place with the ubiquitization of digital media, a disguise that has begun already to fail, and which will soon reach a tipping point with the adulthood of a generation that has always been accustomed to digital media and which holds a greater hostility to property rights over digital objects.[12] Industrial production of digital files is certainly a very particular and perhaps idiosyncratic corner of the economy, but it is no backwater, and is bound to

---

[12] Note, for example, this result from a survey by the Pew Charitable Trusts:

"The vast majority of those who use the Internet to download music files to their computers do not believe they are stealing. Most couldn't care less whether the music they have grabbed is copyright protected, a new survey by the Pew Internet & American Life Project has found.

"Fully 78% of those who download music don't think it is stealing to save music files to their computer hard drives and 61% of downloaders say they do not care if the music they capture is copyright protected. In the general population, those under age 30, those in households earning more than $75,000, and those with college degrees are the most likely to back the idea that downloading music isn't a crime. . . .

"The survey also found that the broader universe of Internet users also supports the idea that downloading music is not an act of theft. Fifty-three percent of all Internet users say downloading is not stealing, while 31% say it is stealing. And the general American public, Internet users and nonusers alike, also agree that downloading music is not stealing, though the margin is just 40%-35%. Many of those who don't have Internet access said in the survey that they had no views on the issue." (Pew Internet & American Life Project. *78% of Those Who Download Music Online Don't Think They Are Stealing*. <http://www.pewtrusts.com/ideas/ideas_item.cfm?content_item_id=95&content_type_id=7>)

become important in another way, due to the outbreak of spontaneous communism in this industry. This is perhaps cold comfort for Marxists, but still a demonstration of the possibility of progress outside of capitalism: use-value in digital media appears to be a solid which remains, even when soaked in the universal solvent of the general equivalence of exchange value, melting into neither air nor dollars.

Karl Marx argued in the *Communist Manifesto* that the falling rate of profit would lead to a crisis in capital; that the falling rate of profit would eventually bring industrial capitalism to break down, to be supplanted by communism.[13] In this chapter, we will first outline Marx's theory about the falling rate of profit and his prediction of the collapse of capitalism that would allow for the emergence of communism. Next, we shall turn to the case itself, investigating the history of the development of the technological advances that have given rise to these recent communistic developments.

Marx's Theory of the Tendency of the Rate of Profit to Fall

Prior to analyzing the specific industries with which we are here concerned, I will first provide a brief outline of Marx's theoretical structure. This will provide for us some language that will greatly aid discussion of the case in general. I do, however, wish once

[13] Meghnad Desai, however, points out that this prediction of collapse, made famously in the *Communist Manifesto*, appears in *Capital vol. I* only in the last three paragraphs of Chapter 32, these three paragraphs forming a section of the work which "though justly famous as a piece of rhetoric, sits uncomfortably with the analytical parts of *Capital* . . ." (Desai, *Marx's Revenge*, pg. 81), and that "not only [in the section on the falling rate of profit], but nowhere else in *Volume 3*, is the apocalyptic vision of the *Communist Manifesto* of Chapter 32 of *Capital Volume I* revisited." (Desai, *Marx's Revenge*, pg. 78). And, indeed the section on the falling rate of profit is titled "The Law of the Tendency of the Rate of Profit to Fall," not "The Law of Falling Profits," and Marx states emphatically that "the law acts only as a tendency. And it is only under certain circumstances and only after long periods that its effects become strikingly pronounced." (Marx, *Capital v. III*, part 3, chapter 14) It is thus arguable that Marx, in his mature consideration, continued to hold the position of his youth that capitalism would inevitably drive itself onward to its own collapse. My work here is in no way dependant upon the inevitability of this collapse, and is in keeping with the late Marx. I do not argue that the collapse of capitalism is necessary, only that it is actual, at least within the industry dependent upon digital media.

again to make clear that I intend my analysis of this case study to be in no way dependent upon contentious elements of Marxist theory. My analysis is not intended to depend upon the Law of the Tendency of the Rate of Profit to Fall, upon the doctrinaire claim that labour-power is the sole source of profit, or even upon the general Marxist conception of technological determinism.[14] This summary section is intended to give a quick and dirty overview of Marx's theory as outlined in *Das Kapital*, and is not intended to reflect a considered position of my own position on these issues.

Marx writes that the production and circulation of commodities "form the historic presuppositions under which capital arises,"[15] and it is an alteration in the form of this circulation that first gives rise to capital. This is a change from the basic, precapitalistic C–M–C form of market interactions – "the transformation of commodities [C] into money [M] and the re-conversion of money into commodities [C]: selling in order to buy"[16] – to the M–C–M form; "buying in order to sell."[17] The crucial difference between these forms of the circulation of commodities is that in the latter the final phase of the exchange results in a situation wherein the value remaining cannot be simply discharged in use. In other words, "in the circulation C–M–C, the money is in the end converted into a commodity which serves as a use-value; it has therefore been spent once and for all,"[18]

[14] Although some degree of technological determinism in a general and very modest sense is an important postulate of the ontological portion of this investigation.

[15] Marx, Karl. *Capital, v.I*, pg. 247.

[16] Ibid., pg. 247.

[17] Ibid., pg. 248.

[18] Ibid., pg. 249.

while the circulation M–C–M results in little else besides[19] a further exchange value, dependent upon further market relations for its desirability.

It seems evident that the only possible purpose of an exchange whose result has no use-value is to gain an increase in exchange value. The origin of this increase can be explained easily with regard to merchants' capital, where the increase emerges from the purchase of goods below exchange value and the sale of goods above exchange value – "buying in order to sell dearer."[20] Industrial capital, however, has a more specific avenue of finding its own increase.

In industrial capital, labour-power gives rise to the increase of capital. Labour-power, "a commodity whose use-value possesses the peculiar property of being a source of value, whose actual consumption is therefore itself an objectification of labour, [and] hence a creation of value,"[21] is bought at the price of its own reproduction, but, when combined with the means of production, is able to produce a, so to speak, value-added product. The finished garment contains a higher exchange value than the sum of that of the cotton from which it is made, that of the machine functionality expended in the manufacturing process, and that of the wages paid to labourers employed. Was this not the case, there would be an insufficient motivation to industrial manufacture. Labour-power, then, being purchased at the cost of its reproduction – the cost of sustaining the workers' ability to continue to bring their labour-power to market (or through oppressive

[19] Putting aside unusual cases, such as G.A. Cohen has noted regarding the definition of money: "[l]ittle in the world satisfies it completely, since almost nothing is capable of monetary use only. Coins can pry open tins of tobacco and notes can feather a bed. But the exchange-value of coins and notes will normally exceed that of non-monetary objects which perform similar consumption services only." (Cohen, G.A. *Karl Marx's Theory of History*. pg. 350.)

[20] Marx, Karl. *Capital, v.I*, pg. 266.

[21] Ibid., pg. 270.

measures sometimes less than this) – can then be, in effect, sold at an increase, for the value of labour-power is measured in accord with the labour-hours required to produce it, and it takes less than an hour for a labourer to produce an increase in exchange value in manufactured goods equivalent to the exchange value of the means by which the labourer is able to reproduce the capability to perform an hour's labour (i.e. room and board, etc.).

This process can only take place if and when the capitalist is able to find labour-power available on the market, a *prima facie* unlikely circumstance given the definition of labour-power as that commodity whose consumption is able to result in a creation of value. Indeed, this can only occur by the separation of the masses from the means of production, making the personal consumption of labour-power impossible or unprofitable. Marx takes care to give a detailed history of this separation under the title of primitive accumulation, a history that need not be of any immediate concern to us here. What we are concerned with is the process of consolidation of capital which moves the labourer ever further from the capitalist, and which moves ever more capitalists into the relative destitution of wage-labour.

Marx identifies three major factors that contribute to this process through economics of scale: co-operation, division of labour, and automation via the employment of industrial machinery. Through each of these techniques, the capitalist is able to increase the rate of surplus value; that is, the proportion of variable capital – i.e., purchased labour-power – which produces surplus value.

In each of these techniques, a capitalist able to make a greater initial investment will be able to utilize her purchased labour-power more efficiently, thereby being able to produce a greater amount of commodities with a smaller amount of labour. Thus, there is

a decrease in the costs of production per unit, which in turn allows the capitalist a greater initial constant capital investment – investment in machinery, co-operation, the division of labour, and the means of production in general – to more easily undercut the prices in a marketplace of capitalists having made a lesser initial constant capital investment. Thus, the larger producers tend to crowd out the smaller producers, even if their rate of profit[22] decreases as capital investment consists of an ever greater proportion of constant to variable capital. Finally, once capital has expropriated self-employed workers, it turns to the capitalists themselves, bringing a "constant decrease in the number of capitalist magnates"[23] as those former owners are forced to sell their businesses and to bring their own labour-power to the marketplace.

Marx, at times at least, theorized that this increasing consolidation, if unchecked, would result in the collapse of a capitalist economy.[24] As relative surplus value continued to rise through consolidation, there would be a decrease in the ratio of variable capital to constant capital, which would quite directly imply a decrease in the ratio of profit, a crisis of realization,[25] and an increase both in unemployment and in the revolutionary class. He noted a number of counteracting forces, the most important for our purposes being the cheapening of the elements of constant capital.

---

[22] That is, the proportion of surplus value created to total capital investment, constant and variable; (s/[c+v]). (Marx, Karl. *Capital, v.III*, pg. 55.)

[23] Marx, Karl. *Capital, v.I*, pg. 929.

[24] Cf. fn 9, above, for a brief discussion of a notable objection to the common view that Marx held that consolidation and the resulting falling rate of profit would bring about this collapse.

[25] Realization, in this context, being the conversion of the surplus value of variable capital into exchange value within the market.

The absolute decrease in variable capital, i.e. the joblessness produced through an ever greater increase of productivity, which was to have brought about the revolutionary moment, was to occur through the relative decrease in variable capital, which is to say, the relative *increase* in constant capital, that was to have arisen from the process of the consolidation of industrial capital. However, as this process continues, constant capital itself requires less labour-power to produce, and thus there is the same general cheapening of the means of production. After all, if there is a decrease in the rate of profit, this can mean only that each produced item represents an ever smaller amount of reified labour, including raw materials, and most importantly, machinery. As Marx summarized, "the same development, which increases the mass of the constant capital relatively over that of the variable, reduces the value of its elements as a result of the increased productivity of labor."[26] Thus, depending on the rate of cheapening and the level of efficiency of means of production within a particular industry, it may be that there is, after all, *no* relative decrease of variable capital, or possibly even a relative *increase* of variable capital, concomitant with absolute decrease of both variable and constant capital.

This absolute decrease in constant capital allows the rate of profit to stabilize or even increase during the process of ever greater consolidation, thereby averting a possible crisis of capital. However, we must take care to look behind the mask of this *deus ex machina*, for that process which brings an absolute decrease in constant capital to a given industry not only restores the viability of consolidated corporations operating in that industry, but also makes the possession of the means of production of that industry ever

[26] Marx, Karl. *Capital, v.III*, pgs. 276-7.

closer to the grasp of the common wage-earner having minimal capital on hand. The process of the absolute decrease of constant capital, seemingly inevitable for the reasons described above, if unfettered, brings the means of production within the reach of common labourers, at which point they are able to benefit from the use of their own labour-power rather than being forced to bring it to the marketplace, thereby undermining one of the conditions necessary for industrial capital. This possibility was not, as far as I can determine, ever addressed by Marx.[27] The most obvious explanation for this is that the cheapening of machinery which would be necessary to make this a revolutionary effect could not have been foreseen at that time – he would have to have been a mystic or a madman to take seriously the possibility that industrial machinery would be so cheapened that a wage labourer would be able to easily purchase manufacturing capabilities sufficient to compete with capitalist magnates. This possibility has, however, been realized, albeit in a limited scope.[28]

At this point, with this theoretical structure outlined, we are ready to consider this change in the means of production in its material circumstances.

---

[27] Although G.A. Cohen is right to assert that, for Marx, the breakdown of capitalism itself was insufficient to establish socialism or communism unless a sufficient level of technological development had been first attained. As Cohen summarizes:

"Believing that a developed technology was an essential precondition of socialist success, Marx would be pessimistic about attempts to 'build socialism' from a baseline of camparative scarcity and industrial immaturity. But since he thought high technology was not only necessary but also sufficient for socialism, and that capitalism would certainly generate that technology, his final position was optimistic." (Cohen, G.A. *Karl Marx's Theory of History: A Defence*. Pg. 206.)

Please do note, however, that this claim that "high technology" is "sufficient" for socialism is still not the claim that I will make here: that digital information technology is not merely sufficient but actually effective – actively revolutionary in some important ways – in bringing about communistic production within its own, admittedly limited sphere.

[28] This does not, of course, change the fact of the absolute decrease in variable capital, even within this limited scope. We have indeed seen recently a very accentuated acceleration of this process; in recent years, there has been a great rise in productivity that has been accompanied by a corresponding rise in unemployment.

The Valorization of Ideas

In this section, I will show how machines that extend the human ability to calculate mathematical functions form the foundation of the technological progression that has led to an industry that is itself revolutionary, that is, an industry wherein the means of production have been cheapened to the extent that the wage-labourer is able to purchase the functional equivalent of a factory.

Early examples of such calculating machines are striking, such as Herman Hollerith's device that allowed census takers to complete the 1890 census in six weeks, a great improvement over the six *years* required for the 1880 census. Nevertheless, the Enigma machine, somewhat later in origin, is perhaps still the most dramatic example of such machines, for its operations were of such complexity that it demonstrated for the first time the kind of opacity which contemporary "boxes" still hold; the interior workings were better understood in abstract and algorithmic terms than mechanically, even though the Enigma contained only such very concrete things as gears.

This mechanism for encoding and decoding messages allowed a small amount of labour-power – an amount that could be spared even by an officer in the field – to valorize[29] a huge amount of spontaneously provided universally available material; in this

[29] That is, add value to. I use the term in the same sense in which the harvesting of natural resources is a kind of valorization: harvesting fish, acorns, or apples does not create the use value of the objects, whose use value was provided by nature, but rather adds use-value to them by organizing them in ways more available to human projects and goals. In the case of fish, this involves catching, cleaning and cooking, in the case of acorns gathering, cleaning and cooking, in the case of apples gathering, and in the case of mathematical facts encoding and decoding. In other words, the valorization of information is the process by which data is converted to knowledge.

case, facts of mathematics.[30] Cryptography is an ancient practice of placing these facts of mathematics, normally not given to playing favorites, decidedly in the service of a particular party. With the Enigma machine, the computational force which officers were able to wield was dramatically increased, however, as a computational tool it was still extremely limited – only able to run a single given algorithm. This was to change with the insight of Alan Turing, who had written years before of the possibility of a '*universal machine*.'

A machine built to valorize mathematical facts can be described as performing a certain set of mathematical operations upon any given numerical input. Rather than building a machine which would perform a certain set of operations, in a certain order, Turing theorized the possibility of building a 'universal machine,' which would have the capability of performing *any* mathematical operation, including the mathematical description of other particular computational devices. Thus, instead of feeding in data to be manipulated in a predetermined fashion, one would be able to enter both data as well as the manner in which it is to be manipulated. It would be able to perform any computationally possible task, although the time span required might be quite significant. This idea, when combined with the electronic circuitry used in the Colossus machine, a British decoding device from 1943, would give rise to the contemporary computer.

---

[30] "The land (and this, economically speaking, includes water) in its original state in which it supplies man with necessaries or means of subsistence ready to hand is available without any effort on his part as the universal material for human labour. All those things which labour merely separates from immediate connection with their environment are objects of labour spontaneously provided by nature, such as fish caught and separated from their natural element, namely water, timber felled in virgin forests, and ores extracted from their veins." (Marx, Karl. *Capital, v.I*, pg. 284.) Mathematical facts fit this definition exactly in that they are available by nature and need only be taken up in human projects. They are, in fact, an even better example for Marx's point in this passage, for they are quite more universally, perpetually, and effortlessly available than the resources cited by Marx.

To emphasize this point: the Turing computer is a *universal machine for the valorization of mathematical facts*. It is able, in theory at least, to objectify any use-value that mathematical operations are able to embody.

In the days of punch cards and vacuum tubes, the constant capital invested in computational devices was very high indeed. Early machines were often very large, very costly to run and repair, and suffered from serious cooling difficulties. Such machines also required a significant amount of labour-power, both in the constant repairs and in the organization of data and results, as well as the assembly-line labour of punching and feeding cards.

As computational devices have become smaller, more reliable, and more powerful, there has been a significant decline in the absolute constant capital that they represent. At the same time, these machines have been able to perform ever more complex operations in an ever smaller and more manageable time frame, and there has been a great increase in capital investment in the creation of ever more complex and effective operational commands. That is to say, as hardware has improved and cheapened, software has been able to represent a proportionally greater capital investment, and it is the peculiar structure of software that provides the core of the changes I mean to address here.

Contemporary information technologies are remarkable in that any information entered can be stored and/or reproduced with absolute fidelity. Value can be preserved with minimal means of production – access to the information along with available storage space – and with negligible labour. This means, of course, that there is, practically speaking, virtually no valorization at all in the production of *any particular*

iteration of a file or program, although there may have been labour required to order the information in a manner having use-value, to make this information accessible to information technology, and so forth. Furthermore, this is true of digital files of any kind, whether the idea is stated in a directly executable form or not, that is, whether the digital file is a piece of software or a document (.mp3, .mpg, .doc, etc.).[31] The production and reproduction of digital files is in this way akin to the production and reproduction of ideas, excepting that digital files may be of a level of complexity and/or length greater than the human platform can support.

More specifically, digital files are akin to ideas in that, as Thomas Jefferson famously stated, "he who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me."[32] Given the minimal means of production – having an input of appropriate format in order to allow processing, such as a reasonable person speaking our mother tongue, as well as being of sound mind, and not being asleep or distracted or so forth – the reproduction of an idea from an outside source is not only usually accomplished with little effort, but furthermore is actually *necessary* if any use-value is to be found in that information at all. Digital files are also such that their reproduction is a necessary means for and an integral part of their consumption.[33]

---

[31] For this reason, I will not differentiate in the following between these kinds of digital files. Both software and documents are similarly losslessly replicable without cost, and, thus, both are equally subject to the analysis here.

[32] Jefferson, Thomas. *Thomas Jefferson To Isaac McPherson, Monticello, August 13th, 1813.*

[33] It has been said that for this reason, any attempt to protect digital information from copying must necessarily fail. The argument is that the digital information must be decrypted at some point, for it is *used* in a non-encrypted form. No matter how complex the system of protection, it will always be possible to tap into the data stream at the point of display or use. A nice recent example of this is the way in which programs such as ourTunes and Blue Coconut connect at the user-end to iTunes' music sharing function,

However, in both ideas and digital files, the initial production process is rather more complex. There are systems under which each operates, and languages in which each is formulated, each of these providing some guidance, voluntary or otherwise, with regard to content and "look-and-feel." Further, neither can exist in isolation; each file is created from within a history of files of which it is a descendant, as with ideas. Either can have use only if it is accessible from what has preceded it, and, indeed, if it is by and large reverse-compatible, yet in each the creation of new use-value requires that there be a significant difference from its ancestors. Each can be successful only through continuing a tradition while at the same time expanding and dissolving its limits in certain productive ways.

Thus, with digital media, the world has become philosophical in a far more literal sense than Marx intended – our machines have begun to take the form and attributes of thought itself. In a similarly more literal sense, philosophy – or, more generally, the idea itself – has become worldly: it has become possible to treat ideas and expressions themselves as if they were objects and commodities.

The Commodification of Industrially Productive Ideas

While it is true that the process of initial production of an idea does expend labour-power, this does not necessarily imply that the author of an idea will expect, or even desire, recompense for this expended resource, for the author may not conceive of her idea to be a commodity. A commodity is produced for trade, for its exchange-value, whereas most ideas are produced first and foremost for internal consumption, their

---

allowing a user to download a shared file despite the fact that iTunes itself, which provides the streaming of the music file, is specifically designed to prevent such downloading.

transmissibility being in the majority of cases a spontaneous surplus freely granted by the author to others.

There is however a point at which such internal consumption no longer presents a use-value significant enough to justify the loss of the labour-power expended in the idea's production. If there is a social benefit to be had in such ideas, the law must intervene in order to encourage their production, for otherwise only a small number of idle rich would be able to thus contribute to social welfare. Rather than directly subsidize such efforts – a step which became necessary anyhow, giving rise to the National Institutes of Health, the National Science Foundation, the National Endowment for the Humanities, and the National Endowment for the Arts, among other similar institutions – lawmakers chose to legally require people to treat ideas as if they could not be easily and indefinitely reproduced.

This intervention is necessary in order to make it possible to treat an idea as a commodity, i.e. as something created for its exchange-value rather than its use-value. As we have already noted, ideas are such that it is far easier to explain a new and interesting idea than it is to come up with one, or, to speak precisely, the exchange-value of the labour-power expended in the process of the initial creation of an idea having novel use-value exceeds the exchange-value of that idea, for exchange value is calculated in terms of the cost of *re*production. Just as the hand-loom weaver saw the value of the product of her labour shrink with the introduction of the power-loom, even though it still required the same amount of labour to produce,[34] the visionary sees the exchange-value of her

[34] "The introduction of power-looms into England, for example, probably reduced by one half the labour required to convert a given quantity of yarn into woven fabric. In order to do this, the English hand-loom weaver in fact needed the same amount of labour-time as before; but the product of his individual hour of

labour evaporate as steadily as it is invested in thought. In both cases, regardless of how much capital was expended in the creation of a commodity, its value is assessed in terms of how much capital would be required to manufacture another such item, and in the process of understanding the use-value of the idea of another I have already expended the labour necessary to produce another item – my understanding – which preserves the use-value found in the other's idea. Thus, the socially necessary labour-time for the reproduction of ideas is *invariably* less than the actual labour-time expended in the initial production process.

As such ideas became useful as capital, others within relevant industries were prohibited, for a time, from the employment of the use-value of those ideas, even though they might already have possession of it, thereby allowing the benefit provided by unique access to that use-value to offset the prior costs of the production of that use-value – this being the patent – or, alternatively, allowing for the attachment of exchange-value to this idea through enforced artificial scarcity of its use-value – this being copyright. This alteration of the profit margin of the creation of ideas is an artificial creation of the conditions under which physical innovation is stimulated. Were this idea to be improved machinery or a novel product, there would be a period of time during which the innovator would be favored in the altered or newly created market, but after a certain period other capitalists would see the benefits of that machinery or product, then joining or leveling the market.[35] Thus, there is a temporary individual benefit to innovation, leading to a group benefit through the creation or development of a market. There being in this case

---

labour now only represented half an hour of social labour, and consequently fell to one half its former value." (Marx, Karl. *Capital, v.I*, pg. 129.)

[35] Marx describes this process with regard to machinery in *Capital v.I*, pg. 530.

no cost to the implementation of innovation, this period of temporary benefit is not given over to innovators whose improvement or new product is not of a material nature. The extension of property rights over immaterial objects provides this initial period of benefit, but must include a time limit if this encouragement is to offer a more general social benefit in the creation or development of a market.

Still, this market development is not the public benefit for the sake of which the United States Constitution gives its Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[36] Due to the vanishingly small investment required to reproduce them, innovative ideas are able to offer their use-value to a far greater range of persons than their material counterparts, and are able to present a much more directly public benefit. Physical innovations are able to benefit the public through cheapening of consumer goods or the general growth of the economy, but ideas are much more able to pass directly into the hands of the public, to be used in accord with their own projects, goals, and desires. This kind of advance, not as directly tied to a specific industry as a material innovation, can indeed properly be called "Progress of Science or the Useful Arts." The maximization of the public availability of these non-material means of production is also embodied in the delimitations of over which ideas it is possible to have rights, these delimitations being designed to provide economic incentives *only* in those cases where the increase in eventual benefit to the public of innovations thereby brought about outweighs the temporary public unavailability of these innovations.

---

[36] *Constitution of the United States of America*, Article 1, section 8, clause 8. (Federal Convention of 1787)

Patent law requires that an idea thereby protected be not merely unknown but also non-obvious, in this way taking care to prevent the privatization of any ideas the development of which would not have required a significant unrecoverable investment. In specifying that it is to cover very specific ideas – processes, usually specific to a single industry – rather than abstract ideas or laws of nature, patent law is also careful to ensure that there is not a separate industry in what we might call "intellectual real estate," where a general idea could be registered, not in order to profit from its use, but instead in order to profit from the resale of rights and licenses; a practice which is very much on the rise in patents due to the congressional underfunding of the Patent office,[37] the immense profitability of such practices, [38] and the vast expense of legal challenges to even

[37] "In 1997 the Patent and Trademark Office received 237,045 submissions . . . [o]bviously, some proposed patents are ridiculous and can be dismissed quickly. Even so, an alarming number of silly patents still survive the process and win approval.

"The modest salaries given to examiners at the agency further suggest management's entrepreneurial spirit rather than a serious concern with thorough scrutiny of patent claims. Although many of the examiners have advanced degrees in highly technical fields, in 1999 the entry-level job descriptions for patent examiners listed salaries ranging from $20,588 to roughly $60,000 . . .

"Michael Kirk, executive director of the American Intellectual Property Law Association in Alexandria, Virginia, and a former assistant patent commissioner, recalled, "I was at the patent office in the 1980s when the first wave of biotech patents hit, and we had to hire examiners to qualify them. . . . We called in some industry folks and asked, 'How much would we have to pay these people?' They came up with a figure higher than the salary of the secretary of commerce."

"A former patent office employee told a writer for *Science*, "They are desperate and they're hiring like crazy." Even a spokesman for the agency, Richard Maulsby, admits, "It is very difficult for us to do all this hiring and to maintain quality."

"Examiners have a strong financial incentive to approve patents. A case does not count as part of an examiner's output until it is closed. If an examiner denies a patent application, the applicant can appeal, dragging out the process and lowering the agency's estimate of the examiner's productivity. One exasperated examiner wrote, "Hey, management pays you for good patents or bad, right? In fact, why should you fight with management? Why reject?"" (Perelman, Michael. *Steal this Idea*. Pg. 57.)

[38] For example, consider Perelman's example of Cadtrack:

"Cadtrack was headed toward bankruptcy in 1983 when the head of licensing at IBM called to discuss the possible licensing of a patent from moving a cursor on a screen. In 1985, [Cadtrack CEO Eugene] Emmerich went to the board of his company and suggested that the company get out of the production business. The company then laid off all of its employees and concentrated on collecting revenues from its patent. By 1997, when the patent finally expired, he had signed deals worth about $50 million with 400 companies.

"Emmerich was proud that only one company refused to take Cadtrack's license– Commodore. He boasted, "So we took them to court and got a permanent injunction barring sales of their computers in

obviously overbroad and inappropriate patent claims,[39] and which also arose recently under trademark law in the form of URL "cybersquatting."[40]

Copyright law is similarly formulated in order to disallow the privatization of general or established ideas. While the language of the law describes copyrighted material in terms of particular expressions, one does not need to replicate an expression exactly in order to be in violation of copyright, any more than I need name that most famous cartoon mouse to ensure that his image be called to mind. Nevertheless, the enforcement of copyright law is flexible enough to allow images and names which are similar but which represent very different ideas, such as the cartoon mice of Art Spiegelman's *Maus*. Only through this delicate balance can innovation be thus encouraged; an excess of scope provides a greater initial incentive, but has an eventual chilling effect, whereas an insufficient scope never presents a significant incentive to begin with.

However, no matter how precise and well-tempered a balance is struck, poor policies regarding enforcement can undermine this incentive as well as eroding certain basic social interactions. As the means of production of certain industries have come

---

the U.S. When that happened, their creditors called in their loans and they went bankrupt. That little patent of ours put Commodore out of business."" (Perelman, Michael. *Steal this Idea*. Pg. 60)

This kind of troubling patent abuse will hopefully decline, based upon the American Bar Association Section of Intellectual Property Law's adoption of Resolution TF-13A in support of recognition of prior user rights, which would help to alleviate the problems and abuses of overbroad patents. Cf. American Bar Association Section of Intellectual Property Law, *Section White Paper on "Agenda for 21st Century Patent Reform,"* Pg. 35. Available at: <http://www.abanet.org/intelprop/home/PatentReformWP.pdf>

[39] "The American Intellectual Property Law group estimated that the median cost of a single patent case in 1994 was $280,000 for each side through discovery and $518,000 through trial. By 1998, the average cost of a trial had soared to about $1.5 million per side." (Perelman, Michael. *Steal this Idea*. Pg. 195)

[40] Cybersquatting is the now illegal practice of registering domain names of obvious interest to other parties – such as those containing trademarked terms or the names of public figures – in order to then sell these domain names at inflated prices to those parties.

increasingly within the possession of the public, industrial and private employment of ideas have become increasingly indistinguishable. It is impossible to tell whether I have sent somebody a music file as a form of private communication, as I might tell somebody about a book in recommending its purchase, or whether I have sent the music file as a form of industrial manufacture, as if I had *manufactured* a book in order that its purchase should be unnecessary. The priority of the industrial interpretation has been codified in law, under section 1201(a) of the Digital Millennium Copyright Act of 1998 (henceforth, DMCA), and, thus, the public is subjected to the strict requirements with which corporations were originally burdened in order to benefit the public.

When combined, the DMCA and the Copyright Term Extension Act of 1998 (henceforth, CTEA) effectively reverse the intended effect of intellectual property rights. These rights were meant to use the tendencies of capital in such a way as to provide a maximum of benefit to the public, thereby using the capital's tendency toward accumulation and privatization against itself. Under the DMCA, the increased benefit of the non-commercial availability of means of production has served as a reason to hold the public to the restrictions intended to constrain capitalist production (Fig. 1, over). Under the CTEA, the benefit emergent from the capitalist production of intellectual property has been withheld from public distribution for such an extended period of time – 70 years after the death of the author, or 95 years for corporate-owned works – that the value and relevance of the majority of intellectual property is largely if not entirely dissipated by the time it enters public domain.[41] As Justice Breyer stated in his dissenting opinion in

[41] A particularly striking example here is the song "Happy Birthday to You." The song seems to have been written and published in 1893 by Mildred and Patty Hill, although at that time the lyric was "good morning to you" rather than "happy birthday to you." After this lyric change, and after the song became widely known, Jessica Hill, the sister of the authors, obtained rights over the song, and published the song, with the

the failed *Eldred v. Ashcroft* challenge to the CTEA, "The present extension will produce a copyright period of protection that, even under conservative assumptions, is worth more than *99.8%* of protection *in perpetuity*."[42] Thus, as we will see in detail in the next chapter, the public is held to the laws meant to constrain business, and business absorbs the benefits intended for the public, and the "copyright bargain" becomes a private seizure of public goods.

Fig. 1
Anti-piracy poster, from mpaa.org

---

new lyrics, in 1935. Thus, under the Copyright Term Extension Act of 1998, "Happy Birthday to You" will enter the public domain in 2030.

The private performance of this song is, of course, not subject to royalties, but it is increasingly difficult for communication to be clearly and merely private. Intellectual property rights have given over large portions of everyday life to corporate ownership, this being obscured due to the profitability of prosecuting only large-scale infringers. As discussed below, this is beginning to change as there are increasingly fewer large-scale infringers and increasingly more small scale infringers.

Annual royalties from "Happy Birthday to You" amount to around $2 million. This is split between the current owners of the copyright, the estate of Jessica Hill and AOL Time Warner.

Information on this topic from Mikkelson, Barbara and David P. *Happy Birthday We'll Sue*.

[42] Breyer, Justice Stephen, Supreme Court of the United States. *Eldred v. Ashcroft, (537 01-618), Dissenting Opinion*. Available at: <http://supct.law.cornell.edu/supct/html/01-618.ZD1.html>

CHAPTER II

A MARXIST ANALYSIS OF THE CRISIS IN COPYRIGHT

The production of a certain category of ideas once had to be encouraged due to the great value of the labour-power expended in their initial production and the vanishingly small exchange value of the product thereby produced. The encouragement of this production, through the artificial creation of governmentally enforced scarcity, allowed for the production of ideas which would have little or no use-value to the producer, and, thus, allowed for the production of intellectual *commodities*, ideas produced for sale rather than personal use, either in the form of a product, such as a book or album, or in the form of machinery, i.e., software.

Now that the means of production of such commodities are greatly and increasingly within public hands due to digital technologies, it has become possible to produce ideas for personal use that are also of value on an industrial scale – that is, as means of production become ever more available, ever more industrial-grade ideas are created for use rather than exchange. Here, if left to their own devices, so to speak, such ideas tend to be shared, rather in the form of a conversation. These non-material means of production, having been invented for personal use, have their reproducibility no longer as a discouragement to their creation, but rather as an accidental bounty, which tends to be given away freely within the community of such unincorporated producers. At this stage in its development, the means of industrial production become themselves revolutionary, bringing about a spontaneous communist economy.

The workings of capital have thereby turned against industrial capitalists. Industrial capitalists, however, have not allowed capital to go its own way, but have instead reverted to an increasingly bald-faced strategy of social and economic repression, this being the only avenue left within an industry wherein the means of production no longer favor accumulation and commodification. Michael Perelman likens this to a return to a kind of primitive accumulation,[43] while Lawrence Lessig characterizes the goal of at least some of the "copyright warriors" as turning the information society into a feudal society, noting that already "the trend is toward the feudal."[44] In this chapter, I will first show that the software and culture industries have truly become revolutionary. I will next describe the three ways – advanced accumulation, systematic colonization, and informational feudalism – in which software and culture industrialists are attempting to counteract the revolutionary nature of the technologies which are the basis of their industries. Finally, I will argue that the economy which has arisen from market forces, which industrialists seek to crush, is indeed a communist one in a Marxist sense, and that Marxists – and indeed all of us – should support this economy to the exclusion of the feudalistic system which software and culture industrialists seek to establish in its place.

Revolutionary Industry

As the sphere of public availability of means of intellectual production expands, the need for governmental encouragement of creation of intellectual property can be

[43] Cf. e.g. Perelman, Michael. *Class Warfare in the Information Age*. Pg. 78, or Perelman, Michael. *Steal this Idea*. Pg. 45.

[44] Lessig, Lawrence. *Free Culture*. Pg. 267. The discussion of the goal of feudalization is immediately preceding; pgs. 266-7.

expected to shrink by the same amount. Where means of production are not publicly available industries must be assured of the potential profitability of any socially beneficial activities we might expect them to perform, but where the public has free access to the means of production the public no longer needs to encourage corporate interests to produce in its stead.

It is clearly no longer necessary for our society to guarantee the profitability of the production of a word processor,[45] a web browser, or even an operating system,[46] for fine examples of such machinery may be, and have been, produced by the public without commodification. Similarly, it has now become quite easy and ever more commonplace for people to compose, produce and distribute music and video without commodification, and without governmentally enforced monopoly over the works thus created, which monopoly, regardless seems to present only an indirect and sometimes almost inconsequential incentive to artists themselves, given the extent to which the current system is biased in favor of distributors rather than artists.[47] Digital technologies have

---

[45] As proof of the lack of need to guarantee profitability of word processing applications, consider that, as of 3/8/04, brothersoft.com had 173 such applications available for download, as either shareware or freeware. A number of these are, of course, multiple versions of the same program, but it is nonetheless obvious that a significant and more than sufficiently large number of small developers are producing such products, many asking for nothing in return, others asking for a voluntary support donation of between $9 and $49. (BrotherSoft, *Word Processor Software Download*) This can be contrasted to a list price of $229 for Microsoft Word. (Microsoft, *Microsoft Office Word 2003: How to Buy*)

[46] Here, we may contrast the free operating systems Linux and Debian with that of Microsoft Windows (listed at $199 on microsoft.com).

[47] For example, Courtney Love argues very effectively that even a band with a million-dollar advance, a %20 royalty rate, which sells a million copies of their album, nevertheless "might as well be working at a 7-Eleven." As she explains,

"What is piracy? Piracy is the act of stealing an artist's work without any intention of paying for it. I'm not talking about Napster-type software. I'm talking about major label recording contracts.

"I want to start with a story about rock bands and record companies, and do some recording-contract math: This story is about a bidding-war band that gets a huge deal with a 20 percent royalty rate and a million-dollar advance. (No bidding-war band ever got a 20 percent royalty, but whatever.) This is my "funny" math based on some reality and I just want to qualify it by saying I'm positive it's better math than what Edgar Bronfman Jr. [the president and CEO of Seagram, which owns Polygram] would provide.

made composition and production of such media considerably easier in any number of ways, from digital cameras and video cameras to software tools, the most notable recent such tool being Apple's GarageBand. In terms of promotion and distribution, peer-to-peer networks are very efficient distribution networks, and webpages can easily serve the function of promotion, advertisement and distribution, as in for example discussion forums,[48] blogs[49] and personal webpages[50] serving as gateways to other sites and/or

---

"What happens to that million dollars? They spend half a million to record their album. That leaves the band with $500,000. They pay $100,000 to their manager for 20 percent commission. They pay $25,000 each to their lawyer and business manager. That leaves $350,000 for the four band members to split. After $170,000 in taxes, there's $180,000 left. That comes out to $45,000 per person. That's $45,000 to live on for a year until the record gets released.

"The record is a big hit and sells a million copies. (How a bidding-war band sells a million copies of its debut record is another rant entirely, but it's based on any basic civics-class knowledge that any of us have about cartels. Put simply, the antitrust laws in this country are basically a joke, protecting us just enough to not have to re-name our park service the Phillip Morris National Park Service.) So, this band releases two singles and makes two videos. The two videos cost a million dollars to make and 50 percent of the video production costs are recouped out of the band's royalties. The band gets $200,000 in tour support, which is 100 percent recoupable. The record company spends $300,000 on independent radio promotion. You have to pay independent promotion to get your song on the radio; independent promotion is a system where the record companies use middlemen so they can pretend not to know that radio stations -- the unified broadcast system -- are getting paid to play their records. All of those independent promotion costs are charged to the band. Since the original million-dollar advance is also recoupable, the band owes $2 million to the record company. If all of the million records are sold at full price with no discounts or record clubs, the band earns $2 million in royalties, since their 20 percent royalty works out to $2 a record. Two million dollars in royalties minus $2 million in recoupable expenses equals ... zero!

"How much does the record company make? They grossed $11 million. It costs $500,000 to manufacture the CDs and they advanced the band $1 million. Plus there were $1 million in video costs, $300,000 in radio promotion and $200,000 in tour support. The company also paid $750,000 in music publishing royalties. They spent $2.2 million on marketing. That's mostly retail advertising, but marketing also pays for those huge posters of Marilyn Manson in Times Square and the street scouts who drive around in vans handing out black Korn T-shirts and backwards baseball caps. Not to mention trips to Scores and cash for tips for all and sundry. Add it up and the record company has spent about $4.4 million. So their profit is $6.6 million; the band may as well be working at a 7-Eleven."

Love then goes on to explain how musicians have been legally denied ownership, for perpetuity, of the copyright for their music via the Satellite Home Viewing Act of 1999, wherein such creative works were reclassified as 'works for hire,' a designation which does not otherwise cover creative or original works. (Love, Courtney. *Courtney Love Does the Math*. Formatting altered from the original.)

[48] E.g., for music <http://www.music-discussion.com/> and <http://www.mudcat.org/>, for open source and free software <http://www.squishdot.org/> and <http://www.techsoup.org/forums/>, or <http://www.filesoup.com/forum/index.php> for copyright-free applications, audio, games and video. Filesoup.com also makes these files available through the forum.

[49] E.g., for music <http://www.arjanwrites.com/> and <http://www.athensmusic.com/>, for movies <http://www.themovieblog.com/>, <http://www.mallasch.com/movies/>, for literature <http://www.drpribut.com/mt/> and <http://www.birminghamwords.co.uk/>.

materials, content specific artist-operated sites,[51] portals open to direct submission by the public,[52] and portals which make free and public domain works available which might otherwise be difficult or impossible to obtain.[53]

All of these functions can now be easily served with little or no commodification, and with no governmentally enforced monopolies, and it is for this reason that I argue that copyright no longer serves the purpose for which it was intended. It may be argued that there will be a lesser amount of music produced and a lower standard of production value in movies were the enforcement of artificial monopolies to be ceased, but it seems to me obvious that, given the reasonable assumption that technological progress does not stagnate, production values would soon increase to current levels and beyond and variety in and amount of music would undoubtedly increase beyond current levels in short order due to increased access of the means of production to an increased number of persons, despite a (perhaps only marginally[54]) lessened economic incentive. We may view this situation in contrast with that of the patent-based artificial monopolies held by

---

[50] E.g. <http://www.sfceltic music.com/listenin.htm>, <http://www.babilim.co.uk/pages/what_music.html>

[51] E.g., for music <http://www.bowloffire.com/> and <http://www.16horsepower.net/>, for video <http://www.homestarrunner.com> and <http://www.illwillpress.com/>, for software <http://www.gnu.org> and <http://www.spiderwebsoftware.com>.

[52] E.g., for music<http://www.cdbaby.net/> and <http://www.opsound.org>, for software <http://www.gnu.org/home.html>, for video <http://channel101.com>, and <http://creativecommons.org> for music, photographs, writing, film, and educational material.

[53] E.g., <http://www.archive.org/movies/prelinger.php> for movies and film ephemerals, <http://www.ibiblio.org/eldritch/> and <http://www.promo.net/pg/> for literature, and <http://marxists.org> for the works of Marx, Engels, and full texts and selections from huge assortment of authors associated with them, from Adorno to Zinoviev.

[54] Many artists, after all, do not retain copyright over their work. Cf. pg. 31, fn.45, above.

pharmaceutical companies, where it is at least much less clear that the general[55] release of property rights into the public sphere would serve the public good, as the manufacture of pharmaceuticals requires means of production publicly unavailable, even if we were to foolishly dispense with the extensive safety testing required prior to release of such commodities.[56] Within the realm of copyright, where such considerations are not at play, both the social ills created by such a setback in intellectual production and the social benefits provided by such variety and production values are minor compared to the ills created, as discussed below, by the enforcement of artificial monopolies in these areas.

Formerly, it had been easy to institute property rights over objects which had no natural affinity for them – ideas, as we have discussed, are immediately transferable and cannot be seized nor fenced-off once expressed and in this way are quite resistant to the

[55] There are however specific circumstances in which such a release of property rights is clearly in the public interest, thus giving rise to the practice of compulsory licensing. In compulsory licensing, a country in a state of medical emergency affirms its right to access intellectual property otherwise protected by patent in order to be able to afford to obtain medication on the scale necessary to deal with the crisis through otherwise illegal generic production. This legal provision is widely recognized outside of the United States, although American corporations and interests have strongly resisted recognizing the legitimacy of this practice under seemingly any circumstance. In a striking example of this opposition, Alan Holmer, president of the Pharmaceutical Research and Manufacturers of America at the time, was quoted in 2000 as saying in reference to considerations of compulsory licensing of expensive HIV medication that "We recognize that AIDS is a major problem, but weakening intellectual property rights is not the solution." (Associated Press and Reuters. *Pharmaceutical firms to slash cost of AIDS drugs for Africa.*)

[56] Michael Perelman is to my knowledge the only person who has seriously argued that the public good would indeed by served by the destruction of these monopolies. He argues this case very convincingly, holding, in short, that the privatization of science produces profit motives which hold back the progress of knowledge through secrecy, which concentrate efforts on disease management rather than cure, which encourage suppression of new techniques in order to maintain market dominance, which lead to a concentration on the often trivial woes of the wealthy over woes such as malaria that tend to affect impoverished peoples, which perpetuate illness by undersaturating the market by artificially inflating prices, which bring about the private seizure of public funding through control over research conducted at universities, and which produce wholly unnecessary costs in marketing and legal battles which are then passed on to the sick and dying. Due to the lack of general availability of the means of production of pharmaceuticals, I do not believe that in this realm we are ready – as we are in the realm of copyright – to allow the public to take over socially necessary production, but Perelman has certainly convinced me that something must be done about the current state of patent law, which, unfortunately, must remain outside of the scope of this work. These arguments can be found in chapters three and four of Michael Perelman's *Steal this Idea.*

possibility of property rights. This had been a simple matter only because the cases in which property rights were extended over ideas were those the use of which required significant capital investment – presses, prototypes, etc. Thus, the only parties *capable* of infringement of a meaningful kind were those who engaged in large-scale production, and were thus few in number, and conspicuous in both manufacture and distribution. With the cheapening and subsequent increasing availability of means of production the number of parties capable of infringement grew explosively, now virtually pervading the public sphere. Small-scale infringement became practical, and the line between significant infringement and insignificant "fair use" has become practically meaningless, for sufficiently widespread "fair use" when given access to the means of production becomes, in effect, a highly distributed large-scale system of production, as is the case with peer-to-peer networks such as Gnutella or KaZaA, or even merely in the collective effect of pervasive and commonplace exchange of digital products in person.[57]

Without centralized high-profile producers, and without the need of a centralized large-scale distribution system – for what is not commodified need never be advertised nor made available for sale – effective monitoring of infringement becomes impracticable. There is no longer the possibility of identifying the single or small number of parties guilty of infringement; instead there is a huge number of parties which are each responsible for an inconsequential degree of infringement, but which taken together nevertheless threaten the viability of corporations trading in such goods.

[57] The practical similarities between the online exchange and the personal exchange of digital files is recognized in references to the "sneakernet." The term originated with the observation that where it is impossible or imprudent to exchange such materials on the internet, one can always put on one's sneakers and exchange the files in person; i.e., over the "sneakernet."

The industries of intellectual production have become revolutionary: with the development of sufficiently advanced digital technologies the means of production have become publicly available, spawning a spontaneous communist economy which is able to motivate the entirety of socially necessary labour within this sphere of production without dependence upon capitalist commodification of goods. This communist economy, furthermore, is in competition with the holdovers from these industries' capitalist past. Thus, we have a rather odd form of class warfare taking place: setting the predominantly middle-class computer-savvy masses against not so much the capitalist or upper class as against large national and multinational corporations themselves (Fig. 2). The digital proletariat seeks to seize the remaining means of digital production not yet in their hands and to use these means to produce freely made goods to serve as a replacement for those produced by industrial capitalists. The capitalist holdovers seek to wrest productive power from the public and generally to ensure that as little as possible is available for free, but that as much as possible must be obtained through the marketplace.

Fig. 2
Anti-RIAA poster, from modernhumorist.com

Unable to act effectively against infringement, capitalist holdovers in revolutionary industries can hope to control the flood only through fear and violence.

The MPAA and RIAA have taken legal action under the DMCA against academic researchers,[58] persons running personal web pages,[59] and private citizens.[60] Additionally,

[58] Dr. Edward Felten, after receiving a threatening letter, was moved to decline to present an academic paper that used research garnered from a public challenge funded by the Secure Digital Music Initiative. As he explained,

"On behalf of the authors of the paper "Reading Between the Lines: Lessons from the SDMI Challenge," I am disappointed to tell you that we will not be presenting our paper today.

"Our paper was submitted via the normal academic peer-review process. The reviewers, who were chosen for their scientific reputations and credentials, enthusiastically recommended the paper for publication, due to their judgment of the paper's scientific merit.

"Nevertheless, the Recording Industry Association of America, the SDMI Foundation, and the Verance Corporation threatened to bring a lawsuit if we proceeded with our presentation or the publication of our paper. Threats were made against the authors, against the conference organizers, and against their respective employers.

"Litigation is costly, time-consuming, and uncertain, regardless of the merits of the other side's case. Ultimately we, the authors, reached a collective decision not to expose ourselves, our employers, and the conference organizers to litigation at this time." (Felten, Edward W. "Reading Between the Lines: Lessons from the SDMI Challenge." Email sent to sdmi-paper-info@CS.Princeton.EDU, Apr. 2001.) Full text of Dr. Felten's letter, along with the threatening letter from The Secure Digital Music Initiative (SDMI), a music industry organization, is available at <http://cryptome.org/sdmi-attack.htm>. Full text of the paper the authors were urged not to present is available at that site, or at <http://www.usenix.org/publications/library/proceedings/sec01/craver.pdf>

[59] For example, Dave Touretzky's home page, available at <http://www-2.cs.cmu.edu/~dst/>. The letter reads, in part, "We have received information that you are unlawfully offering product at the above referenced web site. We have notified your ISP of the unlawful nature of this web site and have asked for its immediate removal. Our letter to your ISP is set forth below for your reference." The appended letter to the ISP, in this case, Carnegie-Mellon University, reads in part

"The district court's ruling makes clear that by providing DeCSS, the above referenced Internet site violates the DMCA. This conduct may also violate the laws of other countries, international law, and/or treaty obligations.

"We therefore demand that you take appropriate steps to cause the immediate removal of DeCSS from the above identified Internet site, along with such other actions as may be necessary or appropriate to suspend this illegal activity. Failure to comply with this measure will subject you to liability as described above.

"We also request that you:

"1. maintain and take whatever steps are necessary to prevent the destruction of all records, including electronic records, in your possession or control related to this Internet site, account holder or subscriber, and

"2. provide appropriate notice to the subscriber or account holder responsible for the presence of DeCSS on your system or network, advising him/her of the contents of this notice and directing that person to contact the undersigned immediately at the email address provided above.

"By copy of this letter, the owner of the above referenced Internet site and/or email account is hereby directed to cease and desist from the conduct complained of herein." The entire letter is available at <http://www-2.cs.cmu.edu/~dst/DeCSS/Gallery/mpaa-threat-feb2001.txt>. (Motion Picture Association Worldwide Anti-Piracy. *Re: Unauthorized Distribution of Copyrighted Motion Pictures*)

A similar letter was sent to John Young, excepting the additional *demands* that he

"3. advise us of the name and physical address of the person operating this site; and

"4. maintain, and take whatever steps are necessary to prevent the destruction of, all records, including electronic records, in your possession or control respecting this URL, account holder or subscriber." Letter is available online at <http://cryptome.org/dvd-mpaa-ccd.htm>. (Motion Picture Association of America, Inc. *Re: Illegal Provision of DeCSS/Circumvention Device*)

they have threatened to hold corporations accountable for the non-business related actions of their employees,[61] to hold employees accountable for the actions of their employers,[62] to hold commercial ISPs accountable for the actions of their customers, to hold universities accountable for the actions of faculty and students,[63] and to hold parents accountable for the actions of their children.[64] They have also begun to pressure colleges

---

For further information regarding DeCSS, please see Appendix B.

[60] "The dispute is not about whether the RIAA will be able to force Verizon to reveal the identity of a suspected copyright infringer, but about what legal mechanism copyright holders may use. The RIAA would prefer to rely on the DMCA's turbocharged procedures because they are cheaper and faster than filing a "John Doe" lawsuit to unmask a peer-to-peer user.

"This case represents the entertainment industry's latest legal assault on peer-to-peer piracy. If its invocation of the DMCA is upheld on appeal, music industry investigators or other copyright holders would have the power to identify hundreds or thousands of music pirates at a time without filing a lawsuit first." (McCullagh, Declan. *ISP appeals RIAA song-swapper subpoena.*)

It is worth noting that such peer-to-peer users may in fact own the material being downloaded, e.g. on CD, and may therefore be engaging in "space-shifting;" a practice which has been recognized as fair use of legally obtained material. However, under the DMCA, this kind of legal action may be taken against what may thus be only apparent infringement.

[61] "The Recording Industry Association of America (RIAA), the Motion Picture Association of America (MPAA) and songwriters' associations have drafted a letter expected to be sent Friday to the Fortune 1000 companies, cautioning executives that employees' song- or movie-swapping could put them at legal risk." (Borland, John. *Labels target CEOs over file swapping.*)

[62] Adobe Systems filed a complaint with the Department of Justice against ElcomSoft Co. Ltd., on grounds that they were selling 'a circumvention device' as defined under DMCA §1201(a). Dmitry Sklyarov, a citizen of Russia, and Ph.D. student, and ElcomSoft employee who had been in the United States at the time presenting at an academic conference sponsored in part by Adobe Systems, was arrested in July 17, 2001, and held until December of that year, when he was allowed to return home. A year later ElcomSoft was cleared of all four charges of producing a circumvention device, as well as the charge of conspiracy. Cf. Bowman, Lisa M. *ElcomSoft verdict: Not guilty.*

[63] Cf. pg. 36, fn 63 above, sent to Carnegie-Mellon: "Failure to comply with this measure will subject you to liability as described above."

[64] "AT 6:30 ON A WARM MORNING IN JULY 1995 NEAR Salt Lake City, Miki Casalino was suddenly awakened by the ringing of her doorbell. When she opened the door, a troop of United States marshals and Novell employees flashed a court order and announced, "We've come to seize your son's computer." Although Casalino had no idea her 18-year-old son was illegally pirating Novell's and other programs on his bulletin board service, she was guilty in the eyes of the law. The marshals raided the house, impounded the computer equipment, and left. Another software pirate shut down." (Rothken, Ira P. *Are You a Software Pirate?*)

and universities to monitor students on behalf of the media industries,[65] and to themselves prevent and punish copyright infringement on campus.[66] The MPAA senior vice president of worldwide anti-piracy, Ken Jacobson, accounted for these actions by explaining that "what we're trying to do is educate the population about what is appropriate, both from an ethical standpoint and from a legal standpoint."[67]

Even if the public interest were best served by preserving intellectual property rights in these cases, the public interest is certainly not served by such widespread and punitive "education" about "what is appropriate." These actions are not well described as education, but are much better characterized as a process of deliberate and systematic

---

[65] "In a letter sent to more than 2,000 university presidents, the Recording Industry Association of America (RIAA), the Motion Picture Association of America (MPAA) and other copyright owner trade groups told university officials that large numbers of students were using college resources to violate federal law.

"'We are concerned that an increasing and significant number of students are using university networks to engage in online piracy of copyrighted creative works,' the trade groups wrote in a letter sent to universities this week...

"The letter, which the trade groups asked college presidents to send to university legal, financial and technological executives, stops short of threatening any kind of legal action." (Borland, John. *Hollywood cracks down campus pirates*.)

[66] For example, Cornell University informed its students in 2002 that students may be subject to disciplinary actions within the school even if they comply with a request to remove copyrighted files. Tracy Mitrano, the DMCA Agent for Cornell University, warned that "without your knowing it explicitly, by downloading [certain file-sharing programs] and the files, your computer is programmed to share it back out into the international Internet community. You are then therefore liable to be in violation of the DMCA, even if all you did was download a single song. Each criminal offense carries with it a minimum fine of $30,000 and a potential jail sentence." Ms. Mitrano also noted, " if you don't like or disagree with the law, learn more about and take a stand on it in the arena of national politics. With implications for free speech and academic inquiry, it might just become the political issue of your generation." (Miltrano, Tracy. "IMPORTANT INFORMATION...")

Another interesting example is the U.S. Naval Academy, which recently took possession of about 100 students' computers due to suspicion of copyright infringement. "Each student gets a computer when they enter the academy. Illegal possession of copyrighted material could carry punishment including court-martial or a loss of leave, according to academy policy.

"The seizure comes just a few weeks after movie and music industry trade groups sent a letter to more than 2,000 university and college presidents across the country, including officials at the Naval Academy, requesting help in cracking down on unauthorized file swapping." (Bowman, Lisa M. *Navy raids student pirates*.)

[67] Quoted in Bowman, Lisa M. *Broadband fans busted over Gnutella*.

crippling of the productive powers of the public. To justify this characterization, we will first outline Marx's idea of primitive accumulation.

Marx describes primitive accumulation as the metaphorical original sin of capitalism; it is the non-market-based seizure of the means of production which forced labourers to sell their labour-power on the market rather than acting as producers themselves, that was necessary in order to put the capitalist system in place, after which time it is able to continue to run as a self-supporting system. As Marx explains,

> The capitalist system pre-supposes the complete separation of the labourers from all property in the means by which they can realize their labour. As soon as capitalist production is once on its own legs, it not only maintains this separation, but reproduces it on a continually extending scale. The process, therefore, that clears the way for the capitalist system, can be none other than the process which takes away from the labourer the possession of his means of production; a process that transforms, on the one hand, the social means of subsistence and of production into capital, on the other, the immediate producers into wage-labourers. The so-called primitive accumulation, therefore, is nothing else than the historical process of divorcing the producer from the means of production.[68]

The capitalist holdovers in revolutionary industries must return to something like primitive accumulation. The means of production having come back into the hands of labourers though the process already described, capitalism has had its legs knocked out from under it by industrial production itself, this being indeed the reason why such

[68] Marx, Karl. *Capital, v.I.* Part VIII, Ch. 26. Available at <http://www.marxists.org/archive/marx/works/1867-c1/ch26.htm>

industries can properly be called themselves revolutionary. In order to recreate this original sin which makes possible capitalist production as a self-supporting system those who seek to commodify intellectual products must separate labourers from their newly gained productive powers.

This, however, cannot in this case be accomplished by straightforward primitive accumulation, for the capitalist holdovers seek to sell intellectual products, which by their very nature, as we have already discussed, contain within them the means of their own reproduction. The solution sought is then the next best thing: to attempt to ensure that the productive employment of the means of production that can no longer be kept from labourers is as limited as possible, and that the products of this productive employment cannot serve the same functions as the commodified products of corporate manufacturing, thus maintaining an artificial dependency upon capitalist production of intellectual goods. This is achieved by means of what Michael Perelman calls advanced accumulation, wherein the public is forced to pay for the privatization of public goods, and by means of a kind of systematic colonization of information itself, wherein an arbitrary and exclusionary system of laws ensures that only large corporations are allowed to fully utilize the means of production commonly available to most members of society. Even these methods, however, will not make capitalist production of intellectual products again possible, for where industry has itself become revolutionary, it seems that a capitalist system becomes impossible.[69] The only recourse which the capitalist holdovers have available – other than giving up on exploitation and allowing progress to occur peacefully – is to return to a variety of feudalism, where labourers have access to

[69] Hence, from this point forward I will refer to attempts at capitalist production after industry has become revolutionary as "capitalistic" rather than "capitalist."

the means of production, but must hand over all their work to the lords of the information industries, and must obtain all their digital goods, not from one another in a free exchange, but always and only from the corporate masters, who can thus set arbitrary and unjust prices.

Three Ways of Being-Against Technology

Cultural industrialists oppose the change implied by and contained within the form of digital technologies in three primary ways: (1) advanced accumulation, (2) systematic colonization, and (3) the attempt to bring about informational feudalism. As we will see in the second portion of this study – the ontological consideration – these three techniques correspond to three more general ways of being-against technology, and have analogs in spheres outside of digital media.

Michael Perelman defines advanced accumulation in contrast to primitive accumulation, stating that

> Rather than directly expropriating physical means of production, advanced accumulation is more indirect. It entails the marshalling of public resources to concentrate informational powers in the hands of great corporations or elite individuals. The public resources might be information proper or the means of conveying information, such as the communications spectrum[70]

Within the realm of patent law – his primary concern – Perelman gives a striking and very clear example of advanced accumulation soon after introducing the term.

[70] Perelman, Michael. *Class Warfare in the Information Age*. Pg. 78.

With regard to pharmaceutical companies, he points out that they patent information obtained through university research, then sell a product based on this research, which, in the case of a successful product, he elsewhere estimates to generate about a million dollars in sales per day.[71] Then, "When challenged [regarding pricing], the corporation will inevitably respond by claiming the need to recoup to expenses of its research, even though public research frequently forms the foundation for much vaunted intellectual property rights,"[72] clearly an ingenious claim when we consider for example, as he points out elsewhere, that "in 1992, the industry spent $1 billion more on promotion of its drugs than on research and development." [73]

He continues,

> In a rather spectacular case, federally funded research was used to map the genetic structure of human beings. Private companies were then permitted to patent these genes. Those that control this valuable information then have the gall to call upon the full powers of the state to protect their intellectual property rights to human genetic material.[74]

The case is similar with regard to copyright. Copyrighted material is protected at public expense, the cost of which, now that the means of production are publicly available, is already great and will be increasingly greater. Copyright laws use the time and energy of our elected representatives, and the enforcement of these laws clogs our

---

[71] Perelman, Michael. *Steal this Idea*. Pg. 195.

[72] Perelman, Michael. *Class Warfare in the Information Age*. Pg. 80.

[73] Perelman, Michael. *Steal this Idea*. Pg.131.

[74] Perelman, Michael. *Class Warfare in the Information Age*. Pg. 80.

courts and is conducted in large part at government expense, both at domestic[75] and foreign.[76] Through the misuse of copyright legislation, corporations acquire rights over

[75] Bob Kruger, Vice President of Enforcement for the Business Software Alliance (BSA), said "We don't like to call [an audit] a raid, but in reality that's what they are – raids." He goes on to describe these raids. As paraphrased;

"Once the alliance has a judge's OK, a team of auditors--usually BSA accountants with laptops--shows up at the business under suspicion, along with a few U.S. marshals. The auditors check what software is on each computer, then asks to see the company's licenses. For each software use for which the firm doesn't have papers, it's fined. While each violation carries with it a fine of up to $150,000, Kruger says, the actual figure comes down to a dance between BSA lawyers and the offending party's chosen representatives. He assures me that the alliance's intent is to make its point via the company's bottom line: 'It's one awfully rude way for companies to realize it's a lot more expensive to violate copyright laws than to comply with them.'" (Jackson, Joab. *Justifying the Means.*)

[76] There follow a sampling of examples of international governmental support of the Business Software Alliance, a trade group concerned with primarily US interests, and with particular US software companies, Microsoft in particular.

Australia

"A coordinated international crackdown saw premises across the country raided and computer equipment seized by the federal police last week, although no arrests have been made to date.

"Many ZDNet readers have expressed anger at what they consider to be the police enforcing copyright law for big software businesses whose own "inherent weaknesses" in software design are the root cause of the problem. Software houses should "put up or shut up" one reader said and not be so keen to spend taxpayers' money.

"'Personally think the police should keep themselves concerned with bigger cyber crime issues like child pornography or Denial of Service attacks. Not raiding peoples' homes and taking computer equipment just because some software or movie company might lose a bit of money. They need to get their priorities right,' another ZDNet reader from Western Australia said.

"Retired computer engineer Keith Styles from Melbourne agreed: 'Let the police do their job of policing for the community and stop working for big business corporations. Copyright is a business problem not a police problem. Let the [corporations] do their own dirty work.'" (Lebihan, Rachel. *Australian Police chastised for Warez raids.*)

Canada

"[M]y workplace received a visit from the Software Gestapo. It's part of a campaign organized by a number of software developers (Microsoft, Adobe, Symantec and a number of others) to reduce software piracy in the workplace and schools. They call themselves CAAST, the Canadian Alliance Against Software Piracy. Although I am no thief, I understand that companies deserve to be paid for their work, but it begs two questions: A) Can companies do this? B) How long until they start searching my home?

"A team of middle aged men in semi-formal attire, stereotypical tech guys, swept the building, checking *every* computer to make sure that we weren't using software that we hadn't properly remunerated the developer for. We knew they were coming, and made sure that our site licenses were in order. From what I know, their lengthy visit went without a hitch. The men were polite, nicely asking each employee if they could take a moment to do an inventory of their workstation. They ran a program that did a quick scan of all applications on the machine, and sent the data to a network server. What they did with the data after that, I'm not sure.

"The situation begs another question: why did they give us advanced notice? Granted, we would be pretty annoyed if they showed up out of the blue, but for all they know, we could have unloaded any pirated apps the night before. Quite simply, they weren't there to catch us, they were there to scare us. To send a message, 'the days of pirated software are over. We're watching you.'

"I, for one, was scared, despite my innocence. Here, I had men, sent by a company (or a coalition of companies, technically), enforcing the law. The government wouldn't do anything to enforce the laws, they have bigger things to care about, so the companies took the law into their own hands, and it's being allowed to happen. What rights do companies have to become vigilantes?" (Andrews, Greg. (Agent000) *A Visit From the Software Gestapo*.)

Croatia

"Microsoft Corp. said it has stepped up its crackdown on software piracy in recent months and announced actions against 7,500 Internet listings for allegedly pirated products in 33 countries...
"In Europe, the Middle East and Africa, the company said it has taken action in 2,274 instances of suspected piracy, sending notices to Web-site owners asking them to remove products listed for sale. It has filed four lawsuits and taken part in 56 raids with law-enforcement officials in that region; in Croatia alone, police in late March simultaneously raided the premises of 52 alleged pirates." (Buckman, Rebecca. *Microsoft loads up for pirate raids*.)

England, Finland, Norway

"To hear the federal government and piracy experts describe it, DrinkOrDie, the network of software crackers that was the focus of worldwide anti-piracy law enforcement action on Tuesday, is the al-Qaida of Internet software theft...

"'They come from all walks of life. Many are successful white-collar business people by day, and DrinkOrDie members by night," [the U.S. Customs Service] said in a statement...

"But when the news broke that the Customs Service, the Department of Justice and foreign authorities executed at least 100 search warrants in the United States, Australia, England, Finland and Norway on Tuesday in an attempt to "dismantle" DrinkOrDie, a lot of people were puzzled. According to the evidence available from several cracking sites, Internet newsgroups and members of the Warez -- or "software cracking" -- community, DrinkOrDie was small potatoes in the world of software theft...

"'Only peasants get caught,' wrote MoRf, a cracker in Moscow, in an online chat room." (Manjoo, Farhad. *Were DrinkOrDie Raids Overkill?*)

Ghana, Nigeria, Cameroon

"Microsoft Corporation, a multi-national software company, last Thursday launched an anti-piracy campaign to clamp down on piracy within some Ghanaian companies.

"The campaign, the company said, was a nationwide exercise that had already started in Nigeria and Cameroon...

"[Mr Franck-Alex Thalmas, Microsoft Anti-Piracy Manager in charge of West and Central Africa] said companies would be asked to take inventories of their software pack and licenses to attest the legality of the software in usage regarding the law and license agreement.

"'If we are satisfied about the information provided we would issue a certificate of compliance to give them the authorization to use the software,' he said." (Accra Mail. *Ghana: Microsoft to conduct raids on pirates*.)

Malaysia

"Following the promise to intensify efforts to crackdown on software piracy amongst end-users the enforcement division of the Ministry of Domestic Trade and Consumer Affairs yesterday raided the premises of a publishing company in Kuala Lumpur for suspicion of using pirated software in the course of conducting its business...

"There is just no excuse. Since the beginning of this month, the Ministry with the cooperation with the Business Software Alliance has advertised extensively in the newspapers and radio to remind senior managers and company directors of the consequences of ignoring the Ministry's warnings." [said Tuan Mohd. Shahar bin Osman, The State Director of Enforcement (Ministry of Domestic Trade and Consumer Affairs) for Wilayah Persekutuan.]

"According to the Copyright Act 1987, if an organization is found guilty of copyright infringement, the company and its director/s may be liable to a fine of up to RM10,000 per infringing software and/or up to five years jail term.

"Speaking on behalf of the Business Software Alliance, Mr. Chee Chun Woei, Vice-President of BSA Malaysia said, 'Companies need to be aware that using pirated software does not simply mean using an illegal piece of software bought from the streets. Indiscriminate copying from an original CD-ROM is also an act of piracy if the license agreement does not allow it.'...

"In complementing the enforcement program of the Ministry, the BSA operates a toll-free hotline number 1-800-887-800 for reports of the use of pirated or unlicensed software in organizations. The BSA provides a reward of up to RM20,000 for every piece of information that results in a successful enforcement action." (Business Software Alliance. *Nationwide Intensification of Raids on Illegal Software Users Begin in Kuala Lumpur*.)

Pakistan

"In the latest move, BSA, the alliance of world's leading software companies has got another three software pirates arrested in Karachi, in assistance with the police.

"All the eleven personal computers (PCs) loaded with the counterfeit computer programmes and the 29 illegal compact disks (CDs) were seized from their possession as a proof of infringing the country's copyright laws, he said.

"The businesses that can afford to use legal software must do so in their own and national interest, [Jawad Al Redha, Director, Business Software Alliance (BSA), Middle East] suggested and clarified when someone creates a new computer programme and his creation is possessed without paying due royalties then it amounts to stealing, "which is neither morally nor legally justified." (Contact Pakistan. *Raids continue to enforce copyright laws*.)

Singapore

"Seven raids were conducted in October, across the island's heartlands like Toa Payoh, Ang Mo Kio, Marine Parade and Bedok North. This is because activity at the traditional centre of pirated goods, Sim Lim Square, has largely been stamped out by police action. The raids turned up over 4,000 pieces of illegal Microsoft goods...

"Microsoft corporate attorney Katharine Bostick said in a statement that the pirates wanted to exploit the worldwide marketing effort for Windows XP. 'Not only are these pirates ripping off legitimate software retailers,' she said, 'they are exploiting the creativity, hard work and investment made by software developers and industry partners.'...

"The number of people apprehended in the raid was not given. However, those convicted of piracy can face up to seven years' imprisonment." (Tsang, Susan. *Singapore raids net pirated Windows XP*.)

South Africa

"[T]he SA [South Africa] Federation Against Copyright and Theft (SAFACT) has declared war on counterfeiting, saying it will be 'embarking on more raids which are expected to lead to convictions' during 2002. It will also be working more closely with other stakeholders, including software companies such as Microsoft.

"Fred Potgieter, MD of SAFACT - an organization which represents distributors such as Ster Kinekor and Nu Metro - said his organization along with other business partners such as Microsoft has assisted the South African Police Services, customs and the Department of Trade & Industry in 'an increasing number of raids and counterfeit product seizures."'

"During 2001 SAFACT conducted 680 inspections and led 133 raids. The organization seized 7 584 VCs, 6 714 DVDs, 5 124 CD-ROMs, while a total of 38 cases were finalised...

"Commenting further, SAFACT's Potgieter said his organization is also working more closely at a grassroots level to combat counterfeiting.

"'We began an initiative last year which is starting to bear fruit. The major flea markets indicated their willingness to work with SAFACT in combating piracy. This lead to us creating a Memorandum of Understanding between our industry and the flea markets which will see all products being authenticated before the exhibitor is allowed to sell. These are all major steps.

"'Our other major objective - besides clamping down on flea markets - is to target roadside traders. This is one of the biggest problem areas when it comes to counterfeit sales,' said Potgieter." (Microsoft. *Anti-piracy stakeholders join hands*.)

our culture, ensuring that our day-to-day experiences are materials in private hands. We can see in the CTEA, for example, that the intention in copyright law can no longer be to merely encourage innovations: no matter what economic incentives are provided, there is no way that our legislature can motivate Walt Disney to create further works, and yet legislators have extended existing copyright claims.

The "copyright bargain" is, furthermore, no longer a bargain at all, but is rather a seizure, for not only does the public pay to provide and protect the artificial monopolies of intellectual property capitalist industrialists, but the public also pays for these

---

Sweden

"MindArk AB, the Swedish creators of the 3D virtual Universe "Project Entropia" was raided by 70 officials of the Swedish court, acting on behalf of Microsoft and three other software companies.

"Microsoft has accused MindArk of infringement on their software rights, stating that MindArk is willingly and unlawfully using over 600 programs without license. The raid on the MindArk headquarters in Gothenburg is believed to be the largest operation ever conducted by a Swedish court...

"Jan Welter Timkrans, the managing director of MindArk AB, said: 'MindArk has duly procured licenses for all software used in its offices. I would even go so far as to say that MindArk is one of the companies with the most stringent policies regarding software licenses in use by its employees.'

"'One can expect that Microsoft and the other companies are keeping track of what and to whom their representatives are selling software. In some cases the registration process involves direct contact between our company and Microsoft or its colleagues. With this in mind, Microsoft must be assumed to know that what they have stated to the Swedish courts is not the full truth, therefore I must assume that Microsoft must have another agenda for their action against MindArk.'

"Jan Welter Timkrans suggests that Microsoft is trying to disrupt the launching of Project Entropia: "All through our development process we have kept track of which companies are visiting our site on the Internet and without comparison Microsoft has been one of the most frequent visitors.'...
"Microsoft of course owns Asheron's Call, which MindArk says is similar to Project Entropia." (PC Game News. *Microsoft Raids Game Developer Offices*.)

Thailand:

"At a shopping center specializing in computer gear, antipiracy raids are a seasonal affair. The software raids are anticipated and the police usually inform software pirators when the raids will occur. The problems of software piracy aren't going away. It is estimated that in Vietnam 99 percent of all software is pirated and in China 96 percent of the all software is pirated. One of the main problems is that Asians are still fuzzy about the concept of intellectual property rights and see little wrong in hunting down a software product at the lowest possible price, even if it is an illegal copy. Dhiraphol Suwanprateep, a Thai lawyer working for the Business Software Alliance (BSA), an international antipiracy lobby, states that 'There is a feeling among some people that the pirate software dealers are simply engaged in competitive business practices against companies who are charging too much for their product.' The US government has been dangling antipiracy incentives. In 1993, the US Trade Representative named Thailand as a 'priority foreign country' and withdrew preferential trade privileges on 16 items. This brought quick results and by 1995, Thailand had a new copyright law stipulating penalties of up to four years in prison and fines of $20,000 for offenders." (Cohen, Yvan. *Software Piracy is rampant in Asia.*)

industrialists to bring about legislation and prosecution which prevents the public from free and fair use of the materials thus provided. This process at its base is the transformation of the public domain into capital, both through the use of public funding for private interests and through the privatization of the commons which was supposed to have been given back to the public as the public's end of the bargain. Advanced accumulation takes from us economic and personal independence and gives us *Independence Day* in its place.

Furthermore, there is a process of systematic colonization of information itself. In the systematic colonization of information – a process that overlaps to a significant extent with advanced accumulation in terms of both methods and goals – individuals are kept from the full and free use of the means of production already in their hands. In order to outline how this is done in the realm of information, we will begin by looking at the idea of systematic colonization in a conventional sense.

Marx, in his discussion of E.G. Wakefield's *England and America*, states that

> The essence of a free colony ... consists in this, that the bulk of the soil is still public property, and every settler on it can therefore turn part of it into his private property and his individual means of production, without preventing later settlers from performing the same operation.[77]

This presents a problem for the capitalist, for workers no longer divorced from the means of production cannot be pressed into labour. But Wakefield has a solution:

> How then can the anti-capitalist cancer of the colonies be healed? ... Let the government set an artificial price on the virgin soil, a price independent of the law of

[77] Marx, Karl. *Capital, v.I.* 934.

> supply and demand, a price that compels the immigrant to work a long time for wages before he can earn enough money to buy land and turn himself into an independent farmer. ... This is the great secret of 'systematic colonization.'[78]

But as Marx points out, "this 'sufficient price for the land' is nothing but a euphemistic circumlocution for the ransom which the worker must pay to the capitalist in return for permission to retire from the wage-labour market to the land."[79]

Industries based on or around computers, especially the software industry, are in this way akin to empires. They must struggle in order to ensure that colonists who find themselves surrounded by free and available means of production do not use these means for their own subsistence and independence, but rather to support the motherland.

The digital consumer is surrounded by rich and arable land. Software may be mined for ore, out of which new competing products may be made. Music may serve as not merely a product to be consumed, but seeds may be saved which can be cultivated into new and attractive varietals. The very look and feel of objects of our digital life, whether .html, .mp3, .mpg, or .exe, may inspire new creations.

In order to keep the production of digital objects from obtaining independence from commodification and from the capitalist motherland, corporate peddlers of intellectual property must ensure that colonists in digital lands are largely and for the most part unable to use the seemingly inexhaustible riches surrounding them to become independent producers, excepting if they should obtain sufficient capital to buy their way in, this price being set high enough to keep anybody from being able to use their land

[78] Ibid. 938-9.

[79] Ibid. 939.

without membership within or formation of a capitalist corporation. Thus, the systematic colonization of information is more insidious than the conventional variety, for the price it sets for becoming a producer is so high as to prevent anybody from paying it who has not already become part of the analogical motherland, i.e., who is not already engaged in capitalistic production of intellectual property and the processes of advanced accumulation, systematic colonization, and information feudalization which are required to make capitalistic production possible after industry has itself become revolutionary. However, systematic colonization of information can be avoided in a way that the conventional variety cannot, for it is not possible to produce land out of whole cloth, so to speak, but it is yet possible to produce digital objects without being subject to the claims of intellectual property.

The systematic colonization of information is being accomplished through closed-sourcing, governmentally guaranteed encryption, licensing, and the assumption of copyright. Through these means the digital colonist, while she cannot be separated from her land, is kept as much as possible from mining it, from trading or selling it, and from sustainably farming it.[80]

Through closed-sourcing we colonists are prevented from improving upon that which we have purchased,[81] we are kept from a means of learning from the achievements

[80] In two senses, one figurative, and one literal. Figuratively in that updates of software and unnecessary backwards incompatibilities, both within versions of a single program and between bundled programs, force us to continual upgrades even when there is otherwise no increase in use-value for us from one version to the next. This economic dependency is an exact analog of the economic dependency brought about through Monsanto's efforts to minimize actual sustainable farming techniques, as discussed in pg. 51, fn. 82 below.

[81] For example, consider the anonymously produced "Phantom Edit" of George Lucas' Star Wars: Episode 1 - The Phantom Menace. The reader will note that this is one of the few cases where the corporate response is reasonable and measured.

and failures of others, and we are denied a valuable educational tool that would otherwise aid us in learning the tools of commerce. Closed-sourcing prevents us from use of information that we have rightfully obtained, information that in some cases has been seized from the public, and over which intellectual property has no legal claim.[82] Nevertheless, closed-sourcing can legally deprive us of this public information through the legal protection of even merely formal encryption.

Through encryption we colonists are denied access to information which we have legally obtained, thus making free use of proprietary information not only illegal, as it is under closed-sourcing, but actually impossible. Encryption of commodities, however, can always be circumvented, as I already noted above, for we can always tap into the data flow at the point of display or use. In order to further prevent us from use of these

---

"When asked about The Phantom Edit while backstage at the MTV Movie Awards Saturday night, George Lucas told Zap2it.com that he wasn't too worried about it.

""The Internet is a new medium, it's all about doing things like that," said Lucas, who added that it gives people a new creative outlet. "I haven't seen it. I would like to."

"The general consensus of fans on the Internet seems to be that the new edit is an improvement on the original version. . . .JM Dash, one of the site's most prolific message board contributors, is also one of the film's most ardent supporters. "The stuff that has been cut out is all about making it a stronger movie and not just some fan cutting out the crap he/she didn't like," he said. "If that were true, it would have just had the Darth Maul sequence looped for two hours." He also said, "[In the Phantom Edit] Anakin is a stronger character. His crappy whoops and oops and that stuff is gone. It makes the kid seem like someone who is strong with the force and worth going against the council for as opposite to the whiny little kid in the original cut."

"Jeanne Cole, a spokesperson for Lucasfilm, told Zap2it.com that because no one at the company had seen a copy of the re-edited version, they couldn't officially comment about the changes. Cole did explain her company's policy regarding copyright infringement, though. "Lucasfilm aggressively pursues anyone involved with the unauthorized sale of our copyrighted materials," she said. But Cole also added that Lucasfilm recognizes the fan following the Star Wars franchise has generated and said the company generally doesn't pursue fans as long as they don't go overboard with their adoration. Essentially, she said, that means: "as long as nobody crosses that line - either in bad taste or in profiting from the use of our characters." . . . "At the end of the day this is about everybody just having fun with Star Wars," said Lucasfilm's Cole. "Go be creative." (Rodgers, Andrew. *'Phantom Edit' Deletes Jar Jar Binks*.)

[82] Copyright-free material may, of course, be incorporated into copyrighted products. However, though encryption (or other use of code, such as the way that .pdf files do not allow copy-and-pasting of text), copyright-free material can be copy-disabled either by the fact of the encryption (if it should be difficult to decode) or by the legal protection of the encryption method itself (for such processes can be copyrighted and patented). For examples of these circumstances, cf. fn. 81 and Appendix B.

materials, encryption has been granted a legal status that criminalizes access to encrypted information, thereby legally denying us not only creative use of but also mere access to legally obtained information, such that we do not have the opportunity to do wrong, for under this protection of even merely formal encryption, we may be cut off from even the intended use of products purchased[83] if this use requires circumvention. Again, the assumption is to criminalize fair use rather than lessening the stranglehold of corporate interests, thereby removing from the public not only free use of purchased proprietary information, but also in some cases even public domain, copyright free, and non-proprietary information.

Through licensing we colonists are prevented from saving seeds from our harvest for replanting, both literally[84] and figuratively. We can be prevented from use of our legally purchased product to make further copies, we can be prevented from lending our copy to friends and relatives, and we can be prevented accessing our copy from more than one location.[85] Through licensing we are stripped of ownership of digital objects,

---

[83] As is the case with persons attempting to view a DVD on a computer running Linux. This requires a licensed copy of the DeCSS or a product manufactured by a party with such a license. No such product is available, thereby preventing legal use. For more information on the DeCSS cf. Appendix B.

[84] I refer to Monsanto's practice of licensing rather than selling seeds. The license includes permission for Monsanto inspectors to show up on the property at any time in order to ensure that seeds aren't being saved for replanting. Monsanto's 'terminator gene' project – cancelled due to public outcry – was an attempt to enforce this licensing requirement and the dependence produced thereby within the genetic code itself by making crops become infertile once sprayed with RoundUp, the only herbicide contractually allowed under the Monsanto license. Monsanto also donates GMO seed to third-world countries, teaching them non-sustainable farming techniques which make these farmers dependent upon Monsanto products and makes these farmers as well as their compatriots unable to sell to many European countries, whose import laws often prohibit the importation of crops from countries growing genetically modified crops. This is then used by Monsanto as an example of philanthropy in order to improve their image.

[85] "Software makers want businesses to buy their products the same way they purchase pens, staples, or automobiles--if you need cars for 10 workers, you buy 10 cars." (Jackson, Joab. *Justifying the Means.*) But this is true for members of the general public as well – for example,

"There are several ways in which you might lift intellectual property from software makers. First, you can soft-lift -- that is, buy one copy of, say, Microsoft Office and install it on your home office system,

and, placed in the legal status of renter, subject to all manner of abuses and unfair contractual requirements.[86]

Finally, through the assumption of copyright – i.e. that material is assumed to be copyrighted over its maximum term without notice to or registration with any centralized database – we colonists are prevented from the use of vast amounts of material that lies entirely fallow,[87] unoccupied and unused resources which the empire would rather fall to decay than be used by independent producers.[88] As Lessig asks rhetorically,

---

your laptop, even your kids' PC. You may also be guilty of LANlifting . That's when you purchase a single-user license for an application but load it on your LAN, giving every PC on the network access.

"In addition, you might have a nasty habit of versionlifting . This is when you buy the same number of software packages as the number of PCs you own, but you only upgrade one or two programs and load the latest versions on all your computers. Think a few recent versions lying around the home office will insulate you from liability? You're wrong." (Rothken, Ira P. *Are You a Software Pirate?*)

[86] "Shrink-wrap contracts . . . are the terms and conditions that accompany software distributed in a retail computer store. Shrink-wrap contracts usually read something like "By opening the packaging on this box you agree to the terms and conditions of the license." The terms and conditions of the license are more often than not located inside the box. . . . Click-wrap contracts were developed in response to the massive growth of the Internet and Internet technology. A party enters into a click-wrap contract when they click the "I agree" or "I accept" button which are preceded by terms and conditions. Examples of where click-wrap contracts can be regularly seen include before you download software, before you book an airline ticket online, before you download music and many more." (Callan, David. *How click-wrap contracts benefit over shrink-wrap contracts*. <http://www.akamarketing.com/click-wrap-shrink-wrap-contracts.html>)

These types of contract are in dispute as to their legality. They may require all manner of waiver of fair use, and are usually long, complex, and difficult enough to find that few end users are aware of the limits of their use of purchased goods, leading to a chilling effect on fair use. There are further problems making true consent problematic, as, for example, that if one should open a shrinkwrap licensed product, one cannot return it to a retail location because they cannot accept returns of opened software boxes in order to prevent from copying the material. Such products must be returned directly to the manufacturer if one declines to accept the terms disclosed after purchase, and manufacturers may refuse to accept a return on the same basis, and even if accepted monetary recompense would be likely to take 8 to 10 weeks.

[87] "The real harm of term extension comes not from these famous works [e.g. Mickey Mouse, *Rhapsody in Blue*, the work of Robert Frost]. . . . If you look at the work created in the first twenty years (1923 to 1942) affected by the Sonny Bono Copyright Term Extension Act, 2 percent of that work has any continuing commercial value. It was the copyright holders for that 2 percent who pushed the CTEA through. But the law and its effect were not limited to that 2 percent. The law extended the terms of copyright generally.

"Think practically about the consequence of this extension . . . In 1930, 10,047 books were published. In 2000, 174 of those books were still in print." (Lessig, Lawrence. *Free Culture*. Pgs. 221-2.)

[88] "For most of the history of film, the costs of restoring film were very high; digital technology has lowered these costs substantially. While it cost more than $10,000 to restore a ninety-minute black-and-white film in 1993, it can now cost as little as $100 to digitize one hour of 8 mm film. . . .

> "But can't you just restore the film, distribute it, and then pay the copyright owner when she shows up?" Sure, if you want to commit a felony. And even if you're not worried about committing a felony, when she does show up, she'll have the right to sue you for all the profits you have made. So, if you're successful, you can be fairly confident you'll be getting a call from someone's lawyer. And if you're not successful, you won't make enough to cover the costs of your own lawyer. Either way, you have to talk to a lawyer. And as is too often the case, saying you have to talk to a lawyer is the same as saying you won't make any money.[89]

Of course, if one does not even attempt to make a profit, one is still committing a felony, and is still liable for damages to the copyright holder, and one will likely be, in the end, just in a worse situation if the lawyers should arrive.

Through these four primary avenues, and in other ways less important and too numerous for me to discuss in detail, the capitalist holdovers have put legal barriers in the way of the use of the digital bounty all around us. The effect is the systematic colonization of information itself: only corporations and economically elite individuals are able to pay the prices required in order to freely put information to use. Only they can afford the expense of a lawsuit, and we mere colonists cannot fight even a spurious and unjust claim of infringement without devastating loss of property and livelihood. Only they can afford to pay the absurd and exclusionary fees attached to legal use of

---

"But by the time the copyright for these films [viz. those among the earliest protected under the CTEA] expires, the film will have expired. These films were produced on nitrate-based stock, and nitrate stock dissolves over time. They will be gone, and the metal canisters in which they are now stored will be filled with nothing more than dust." (Lessig, Lawrence. *Free Culture*. Pgs. 224-5.)

[89] Lessig, Lawrence. *Free Culture*. Pg. 224.

materials, fees that ensure that we colonists cannot ourselves become producers.[90] Furthermore, only they can pay the legislative equivalent of the poll tax: the immense amount of money that must be spent in most cases in order to get legislation on the table, and unless there is first a public uprising, we colonists would certainly be unable to marshal the resources to counterbalance the capital investments of intellectual property corporations in both lobbying and campaign contributions, if we should wish to pass legislation limiting the artificial monopolies of the intellectual property empire.

As we have already noted, systematic colonization of information is in a way more insidious than systematic colonization of a conventional sort, for it sets the price of free use too high for common labourers. It must do this, for its industry has become revolutionary, and any common labourer can now produce goods on an industrial level; goods which can most certainly rival those of corporate capitalistic manufacture in terms both of quality and quantity, and most assuredly price. The overall end goal of this variety of systematic colonization is not then to ensure that an orderly and reasonable

---

[90] For example, consider this example from Lessig:

"In 1990, [Jon] Else was working on a documentary about Wagner's Ring Cycle. . . . During one of the performances, Else was shooting some stagehands playing checkers. In one corner of the room was a television set. Playing on the television set, while the stagehands played checkers and the opera company played Wagner, was *The Simpsons*. As Else judged it, this touch of cartoon helped capture the flavor of what was special about the scene." Else then contacted *Simpsons* creator Matt Groening to clear permissions for the incidental use of copyrighted material, who said it was fine, but that he should clear it with the production company, Gracie Films. They were fine with the use as well, but told him to clear it with their parent company, Fox. "Then, as Else told me, "two things happened. First we discovered . . . that Matt Groening doesn't own his own creation – or at least that someone [at Fox] believes he doesn't own his own creation." And second, Fox "wanted ten thousand dollars as a licensing fee for us to use this four-point-five seconds of . . . entirely unsolicited *Simpsons* which was in the corner of the shot."

"Else was certain there was a mistake. He worked his way up to someone he thought was a vice president for licensing, Rebecca Herrera. He explained to her, "There must be some mistake here. . . . We're asking for your educational rate on this." That was the educational rate, Herrera told Else. A day or so later, Else called again to confirm what he had been told.

""I wanted to make sure I had my facts straight," he told me. "Yes, you have your facts straight," she said. It would cost $10,000 to use the clip of *The Simpsons* in the corner of a shot in a documentary film about Wagner's Ring Cycle. And then, astonishingly, Herrera told Else, "And if you quote me, I'll turn you over to our attorneys."" (Lessig, Lawrence. *Free Culture*. Quoted and paraphrased from pgs. 95-6.)

capitalist economy is created, for fair capitalist competition already brought about the spontaneous communist society that this systematic colonization is intended to disrupt. The overall end goal is instead to bring about a kind of feudalism, for it must to the greatest extent possible transform labourers into mere serfs, for in revolutionary industries a creative and industrious labourer can compete with any magnate.

As Lessig explains it,

> Under feudalism, not only was property held by a relatively small number of individuals and entities. And not only were the rights that ran with that property powerful and extensive. But the feudal system had a strong interest in assuring that property holders within that system not weaken feudalism by liberating people or property within their control to the free market. Feudalism depended upon maximum control.[91]

Lessig is concerned here with the hostility not merely towards those who object to the strong property rights granted over intellectual property but also towards intellectual property rights holders who wish to release their own work into the public domain. This

[91] Lessig, Lawrence. *Free Culture*. Pg. 267. Shortly after this passage Lessig references Drahos and Braithwaite's book *Information Feudalism.* I do not reference this work to a greater extent because Drahos and Braithwaite do not make a particularly strong case that the emerging situation is best characterized as feudalism rather than some other kind of consolidation, nor, I should take care to note, do they attempt to. Their idea of feudalism is exhausted for the most part by what we have here discussed as advanced accumulation and systematic colonization, as may be clear from a fairly characteristic passage: "By reproducing the times tables, growing their own seeds, using traditional medicines or selling indigenous art [citizens] may be trespassing on an intellectual property right that has been appropriated by a large company. . . . This is what we mean by being a trespasser on your own heritage. . . . This is what information feudalism means. When Monsanto contractually imposes obligations on farmers using the lever of its control over intellectual property in seeds, Monsanto does act like the feudal lord who allows serfs to till his land so long as they honor the obligations that are his due." (pg. 201) The idea of informational feudalism which I am trying to put forth is somewhat more robust and precise than theirs.

This should not be in any way taken as a criticism of the book, which is exceedingly well researched and well argued besides. My intention in this comment is only to explain why I do not further reference the work in connection with the charge of feudalism, and to differentiate my use of feudalism from theirs.

latter form of hostility is exemplified by U.S. Patent and Trademark Office acting director of international relations Lois Boland, who stated that "open-source software runs counter to the mission of WIPO, which is to promote intellectual-property rights," and that "to hold a meeting which has as its purpose to disclaim or waive such rights seems to us to be contrary to the goals of WIPO."[92] This hostility cannot be explained by a commitment to property rights, for as Lessig points out,

---

[92] Quoted in Lessig. *Free Culture*. Pg. 265. To be exact, the WIPO states: "The mission of WIPO is to promote through international cooperation the creation, dissemination, use and protection of works of the human mind for the economic, cultural and social progress of all mankind. Its effect is to contribute to a balance between the stimulation of creativity worldwide, by sufficiently protecting the moral and material interests of creators on the one hand, and providing access to the socio-economic and cultural benefits of such creativity worldwide on the other." (WIPO. *WIPO Intellectual Property Handbook: Policy, Law and Use*. Available at: <http://www.wipo.int/about-ip/en/iprm/pdf/ch1.pdf>, pg. 5) This reinforces the implication of the quote above, for it is stated that it is the work of the human mind that is to be protected rather than the rights of the author or inventor. Similarly, we see that the WIPO seems to equate stimulation of creativity worldwide with such closed-source protection, as in this passage from the same document: "WIPO increasingly does not stop short of promoting all kinds of intellectual property. This is only the means to achieve an end, which is to promote human creativity that results in industrial and cultural products and services enriching human society as a whole. Thus WIPO is increasingly involved in helping developing countries, whose creativity has yet to be adequately harnessed, to receive the full benefits of the creations of their citizens, as well as those of the outside world. WIPO's role is to assist them also in the preparation and enforcement of laws, in the establishment of sound institutions and administrative structures and in the training of appropriate personnel." (Op. cit. Pg. 6) This statement seems to imply that the WIPO will help developing countries by bringing in strong intellectual property rights, and by making developing countries into exporters of intellectual goods, which would admittedly be a welcome change from the historic and ongoing seizure and inappropriate recompense of the traditional and cultural knowledge and flora of peoples in developing nations. Nevertheless, it is not at all clear that strong intellectual property rights are in the best interests of developing nations, especially given the comparative difficulties in establishing a claim to compulsory licensing through WIPO or TRIPS, and, just as, in the quote above, it is inappropriate for the WIPO to assume that it is always in accord with the desires and interests of the author to impose exclusive rights, similarly it is inappropriate to assume that desires and interests of developing peoples are best served by signing on to a strong intellectual property regime. John Barton points out, for example, that "Devloped countries often proceed on the assumption that what is good for them is likely to be good for developing countries . . . [B]ut in the case of developing countries, more and stronger protection is not necessarily better," (Quoted in Mantell, Katie. *Patents 'could hinder poverty reduction'*) and the 2002 report on Integrating Intellectual Property Rights and Development Policy from the Commission on Intellectual Property Rights strikes a note of caution: "Whether IPRs are a good or bad thing, the developed world has come to an accommodation with them over a long period. Even if their disadvantages sometimes outweigh their advantages, by and large the developed world has the national economic strength and established legal mechanisms to overcome the problems so caused. Insofar as their benefits outweigh their disadvantages, the developed world has the wealth and infrastructure to take advantage of the opportunities provided. It is likely that neither of these holds true for developing and least developed countries." (Commission on Intellectual Property Rights. *Integrating Intellectual Property Rights and Development Policy*. Executive summary, pg. 6. Available at: <http://www.iprcommission.org/graphic/documents/final_report.htm>)

> even if one believed that the purpose of WIPO was to maximize intellectual property rights, in our tradition, intellectual property rights are held by individuals and corporations. They get to decide what to do with those rights because, again, they are *their* rights. If they want to "waive" or "disclaim" their rights, that is, within our tradition, totally appropriate.[93]

This hostility towards any broadening of the public domain does indeed go beyond advanced accumulation and systematic colonization, but does not itself constitute informational feudalism. In addition we need to consider contemporary analogs of three other aspects of traditional feudalism: (1) the way in which serfs belong to the land rather than to themselves (as is the case in capitalism) or to other humans (as is the case in slavery), (2) the way in which guild structures ensure that labourers are unable to wield their productive power without membership, and (3) the overall structure within this bipartite system which amounts to an unchanging caste system based upon ability to freely use the means of production common to all.

In the feudal economy, land is given over to nobles who extract a tribute from those who work and live upon the land. Thus, "Like tribal and communal ownership, it is based again on a community; but the directly producing class standing over against it is not, as in the case of the ancient community, the slaves, but the enserfed small peasantry."[94] However, here the means of production assert a kind of dominance over the

---

[93] Lessig. *Free Culture*. Pg. 266

[94] Marx, Karl. *The German Ideology*. Part 1, A, 3. Available at: <http://www.marxists.org/archive/marx/works/1845/german-ideology/ch01a.htm>

community for "The serf is the adjunct of the land. Likewise, the lord of an entailed estate, the first-born son, belongs to the land. It inherits him."[95] Further,

> This feudal system of land ownership had its counterpart in the towns in the shape of corporative property, the feudal organization of trades. Here property consisted chiefly in the labour of each individual person. The necessity for association against the organized robber-nobility, the need for communal covered markets in an age when the industrialist was at the same time a merchant, the growing competition of the escaped serfs swarming into the rising towns, the feudal structure of the whole country: these combined to bring about the guilds. The gradually accumulated small capital of individual craftsmen and their stable numbers, as against the growing population, evolved the relation of journeyman and apprentice, which brought into being in the towns a hierarchy similar to that in the country.[96]

In the informational feudalism which the capitalist holdover seeks to bring about there is no clear analog to this bipartite structure, but our position as labourers in informational economies takes on aspects of both serfdom and guild membership, and our position as consumers takes on aspects of those freemen who are neither serfs nor guilded, with the exception, of course, that we have means of subsistence not altogether dependent upon informational economies.

In informational feudalism, we would be born serfs. Born onto lands already owned by others, we would be able to use our productive force only insofar as we pay

---

[95] Marx, Karl. *Economic and Philosophic Manuscripts of 1844*. First Manuscript, Rent of Land. Available at: <http://www.marxists.org/archive/marx/works/1844/manuscripts/rent.htm>

[96] Marx, Karl. *The German Ideology*. Part 1, A, 3. Available at: <http://www.marxists.org/archive/marx/works/1845/german-ideology/ch01a.htm>

tribute to the noble landowners. We could write only insofar as we pay for Microsoft Word, and insofar as we pay for the updates required by the updates of our operating systems, which are in turn required for our continued compatibility with those who have already updated their software. Furthermore, our consumption would be limited to those provided by these lords; we could listen to music and watch movies only by paying tribute to labels and studios. We would be born, and live out our lives, upon cultural soil already and ever owned by the few and the powerful.

In order to profit from our productive powers to create goods, we would have to join guilds. To publish we would have to prove our worth to publishing houses and agree to their terms. To record and release music, we would have to join a label, for only they would be able to convince (i.e. pay in cash or kind) the radio conglomerates to play our music. To film and release video, we would have to sell ourselves over to the interests of studios or networks, for only they can withstand a charge of infringement. To create software or games, we would have to become a part of a large software company, for only they can stockpile the patents needed in order to negotiate release of applications.[97] In each case, the guild keeps not only the greater part of the profits, but usually – less so with publications – also keeps the majority of ownership rights over our products.

Others are then born into our products, which we cannot allow them free use of, for our guilds and lords retain ownership of them. Thus, the world which the copyright warriors wish to bring about is not only feudalistic in that it depends upon suppression of

[97] "Patents most benefit behemoths with huge patent portfolios. IBM, the No. 1 holder, has about 20,000 that generate more than $1 billion a year in licensing fees. But even giants such as Intel bemoan a system they say forces them to use big chunks of research budgets to stockpile patents just to use for cross-licensing when other patent holders threaten them." (Davidson, Paul. *Patents out of control?* <http://www.usatoday.com/money/companies/regulation/2004-01-13-patentscover_x.htm>)

making informational goods freely available, but also in that it would establish an unchanging caste system in which only the few could ever freely use that otherwise available to the many, and in which the many can only ever use the means available to them by virtue of their fealty to the few, thereby reducing us to serfs belonging to the very lands we work.

As Lessig says, "the question now is whether [information society] will be free or feudal," just as Roger Garaudy wrote in 1969, when he asked whether digital technologies will "bring about renewed alienation in a technocratic form of totalitarianism, or an unprecedented liberation of the creative potential in man, in each and every human being."[98] This is a question that we have the responsibility and privilege to answer. The complication, and, perhaps – if we can adopt the Heideggerian phrase here without entirely debasing it – the danger which holds within it the saving power, is that ultimately 'feudalism' and 'serfdom' are poor descriptions of our relation to productive forces, however rhetorically effective and descriptively compelling they may or may not be.

G.A. Cohen describes "ownership positions of immediate producers" as that the serf is an owner of some labour power and some means of production, as opposed to a proletarian, who owns all of his labour power and none of the means of production, an independent producer, who owns all of both, and a slave, who owns none of either.[99] Cohen then goes on to describe the different combinations which do not appear in the standard set, the first of which – (5): he who owns none of his labour power but all of the means of production – Cohen claims "depicts an incoherent set of rights. For if *X* is the

[98] Garaudy, Roger. *The Crisis in Communism*. Pg. 11.

[99] Cohen, G.A. *Karl Marx's Theory of History: A Defence*. Pg. 65.

sole owner of *all* the means of production he uses . . . he is entitled to use them without the direction or interference of another person. Yet (5) also states that *X* has no authority whatsoever over the disposition of his own labour power."[100] Surely Cohen is right in claiming that this situation is incoherent, and yet in some important aspects this seems to be the regulative ideal for the consumer under informational feudalism. We see this more clearly in his ongoing discussion:

> (5) is the mirror image of the proletarian . . . The proletarian may do anything he wishes with his labour power, short of violating the general laws of society, and nothing may be done with it without his contractual consent. He may not, of course, work with whatever means of production he chooses, but this follows from the exclusion of illegal behaviour in general. For parity, the person described in (5) should, in virtue of his supposed ownership of means of production, be able to do whatever he wishes with them within the law, yet this is excluded by his being forbidden to work with them as he wills, which is not a general law, but a legal feature of his particular situation.[101]

Now, of course, there *is* a law which forbids from doing "whatever we wish" with the intellectual goods we purchase, and yet it is still the case that we own copies of mp3s, DVDs and applications. And, further, with digital objects – as we have discussed to some extent, and will discuss in more detail in chapter 6 – it is impossible for us to own the digital consumer object without also always already owning the means of production of it. For these reasons, I hold that it is more appropriate to say of our digital serfdom that, with regard only to our lives in relation to intellectual goods, that intellectual

[100] ibid. Pg. 66.

[101] ibid. Pg. 66.

property maximalism moves us towards a situation wherein we could be appropriately said to own all the means of production, and yet not own our labour-power with relation to them; a kind of regional approximation of (5) above. We might describe this situation as the ideal consumer: the ideal consumer has access to the means of production, and yet is unable to do anything with them, and therefore must always purchase in order to consume. Again, a chief example here is the farmer who has every opportunity, but not the legal right, to save seed from harvest to replant; we are prevented from becoming independent producers, not because we have no access to, or cannot afford the means of production, but simply because we are legally prevented from using it, either directly through intellectual property rights, or indirectly through the fear of litigation and collusion of industrial producers.[102]

Thus, abandoned by capital, capitalists have used laws intended to bind their hands in order to prohibit productive forces from further development. In doing so, they have appropriated the functionaries of the governments, both domestic and foreign, in order to keep wage-labourers from the productive use of the means of production now within their hands. Through advanced accumulation, they rob the commons at public expense. Through systematic colonization, they prevent our use of that which has been taken from the commons. Together, these work to bring about informational feudalism, in which our lives are lived on their property, and we have no choice but to consume

[102] And this collusion is not limited to cross-licensing or anti-competitive bundling; we can see a striking example in the current fears about the loss of network neutrality, which loss would help exclude independently produced content from being able to effectively compete against commodified goods produced by the copyright industries.

what they provide at the prices they set, to produce only by their fiat, and to sign our own work over to them if this work is ever to reach the public.

This program has not yet been completed, and even if it were completed, it would still only be further grist in the mill of history, which, if we were to sign on to Marx's technological determinism, would progress inevitably away both from capitalism and from its regressive neofeudal stopgap as well, towards a future of communal, bazaar-model intellectual production. However, regardless of our views on determinism, this future is already with us in at least an inchoate form – the inchoate communistic economy, spontaneously arisen from the public availability of the means of production, which is embodied within the open source movement and p2p networks. We have yet an opportunity to bring the future sooner rather than later, and with less upheaval now than in the future when feudalism may have gained sway despite the resistance of the means of production themselves. We must resist; we must riot in the online streets, and we must work our digital plowshares into swords. We must rip, we must mix, and we must burn.

Cold Comfort

I've called the community around open-source software, freeware and shareware, and filesharing a spontaneous communist economy. While this may be cold comfort to Marxists, the sudden spawning of a communist economy is nevertheless significant. It must, however, still be shown that this economy can properly be called "communist," and that this label has no necessary connection to state communism or communist nations.[103]

[103] Although I will argue in the next chapter that the proper governmental response to this crisis in copyright is to intensify some socialistic aspects already present within our democracy. This is, however, not something for which I argue on Marxist grounds, and, thus, is not addressed here.

Filesharing networks distribute goods primarily and for the most part,[104] in accord with Marx's words, "from each according to his ability, to each according to his needs."[105] Each user provides whatever bandwidth and content they wish, and chooses from the available wares/z whatever they should desire. Freeware is created on just the same basis, authors freely granting possession of their creations to whoever has a need for it, and similarly taking from the shared pool of code whatever they desire. On this basis, a great wealth of high-quality goods are created and given and taken freely. Further, the motivation for production is very much in line with the way Marx described it in his discussion of communism his *Comments on James Mill, Elémens d'économie politique*. As Daniel Brudney summarizes,

> in a communist society agents would find individual fulfillment in the process of production, both in the activity itself and in the fact that the activity's result is something external in which an individual can see a concrete manifestation of her individuality . . . [and regarding the agent's relation to other agents] in a communist society, agents would "complete" one another . . . [and] in the other's use of my product I would find satisfaction in "having thus created an object corresponding to the need of another *human* being.[106]

But we should also look at Marx's somewhat different description in *The Communist Manifesto*:

---

[104] That is, excepting the minor requirement, which most filesharing applications allow but do not force the user to make, that users refusing to share files not be allowed to receive files.

[105] Marx, Karl. *The Critique of the Gotha Program*, ch. 1. <http://www.marxists.org/archive/marx/works/1875/gotha/ch01.htm>

[106] Brudney, Daniel. "Community and Completion," in *Reclaiming the History of Ethics*. Pgs. 389-90.

> In bourgeois society, living labour is but a means to increase accumulated labour. In communist society, accumulated labour is but a means to widen, to enrich, to promote the existence of the labourer. …Communism deprives no man of the power to appropriate the products of society; all that it does is to deprive him of the power to subjugate the labour of others by means of such appropriations. [107]

It may be objected that this economy cannot properly be said to conform to this ideal, due to the fact that the creators of some of these social products did not intend to share them freely, and that, therefore, the appropriation of such goods constitutes the subjugation of the labor of such creators. We shall see that this objection cannot hold.

Most arguments for the harmlessness of unauthorized copying derive from Richard Stallman's argument, in his famous essay "Why Software Should Not Have Owners," wherein he argues that the perception of harm in unauthorized copying has to do with a misuse of our intuitions about material objects, wherein copying is equated with theft. As Stallman argues

> When I cook spaghetti, I do object if someone else eats it, because then I cannot eat it. His action hurts me exactly as much as it benefits him; only one of us can eat the spaghetti, so the question is, which? The smallest distinction between us is enough to tip the ethical balance.
>
> But whether you run or change a program I wrote affects you directly and me only indirectly. Whether you give a copy to your friend affects you and your friend much more than it affects me. I shouldn't have the

[107] Marx, Karl and Friedrick Engels. *The Communist Manifesto*, pgs. 25-6.

> power to tell you not to do these things. No one should.[108]

The creation of the author is not in any way touched by its replication. This is contradicted only when such replication makes unnecessary the purchase of such a creation, this purchase being made possible only through governmental enforcement of artificial monopolies, which, as we have discussed, is becoming increasingly fruitless for and repressive to the public for the benefit of which these monopolies were initially granted. It is wholly unreasonable and unrealistic for any author, today, to place her work within the marketplace with the expectation of monopolistic control over its distribution, just as it would be unreasonable and unrealistic for me to expect to be able to support myself by making faces on the street, no matter how much time I may have invested in perfecting the skill. Furthermore, the reproduction of such material does not subjugate the labour of the author to the project of accumulation of labour, but frees that labour in the sense that it makes that labour available for the enrichment and promotion of both the existence and labour of other workers.

If unauthorized copying is an appropriation of goods at all, it must be an appropriation of ideas and algorithms, not of the form of their articulation. When I take your dinner, you are the less for it, and when I take your book you are also thereby lessened. When I take your idea, it is true that none is lessened by this action, but there is yet a gain. This seems to violate some sort of intuitive law of conservation – I have gained by the product of your labour, yet I have done so in a way that takes nothing from you. Use value has escaped from exchange value: among ideas and algorithms we can

---

[108] Stallman, Richard. *Why Software Should Not Have Owners*. <http://www.gnu.org/philosophy/why-free.html>

gain use value, but we can, strictly speaking, find no exchange value, for in the "exchange" of digital files, as with the "exchange" of ideas, you can reproduce and use my creation, but the creation is never actually exchanged. Once the process of creation and reproduction of informational goods has reached a certain level of automation it no longer makes sense to speak of the exchange of such goods, but only of the transfer of such goods.

An alternative and in this regard more accurate model might be that of the performance. There is no direct material exchange in payment for a performance, as there is for payment for a meal. Setting aside the modern complications of concert venues and performance halls, the performer gets money, the spectator gets to experience the performance, and perhaps comes away from that performance with new ideas, but whereas the spectator is has undergone a monetary loss and an ideal gain, the performer has lost nothing material, but only gained, presumably as a retroactive payment in arrears for the labour required in the composition of the material performed. Thus, it may be argued, the unauthorized copying of digital files is akin to sneaking into a performance, and would thus represent lost profits, and, therefore, arguably a kind of subjugation of labour, and much more clearly a kind of subjugation of labour in those cases in which such digital files are used for profit, as in a case where software in copied without license and used in a for-profit business.

This analogy may be faulted in that, with digital files, it is as if, in the analogy, any person attending the performance would be able thereafter to flawlessly reenact the performance. Thus, as already discussed, whatever use value the attendee might gain in exchange for their ticket – the new ideas, perspectives, etc. – are appropriately used in a

way that cannot be easily differentiated from a reproduction of the original product. That is, in our analogy, it is as if recommending a performer might be indistinguishable from reproducing a performance, just as trying out commercial software prior to purchase may be indistinguishable from precluding purchase via remanufacture of the product, and as listening to a song from an album or watching an mp4 version of a movie may be done indistinguishably as either a preview pursuant of purchase of the commodified work or an appropriation of the work in lieu of purchase.

The industrial commodification of intellectual property requires an ever stricter delimitation of normal social interaction as ever more inter-compatible, standardized, and technologically advanced means of information storage and communication become part of our normal social interaction. The price of admission to a performance, at one time, could serve as a kind of rough analogy to the purchase of a book or attendance of a lecture.[109] It was possible to retain the viability of this analogy, and even to equate reproduction of such a commodified expression with theft and piracy, only while the purchase of a book or ticket could be easily distinguished from the reproduction of the contents of the book or the performance itself. Once the commodity sold loses its material content – time, place, actual paper and ink, actual persons, instruments, and so forth – and once the means of storage and use of the commodity become sufficiently widespread, the sale of the information becomes distinguishable from conversation and information exchange of a non-commodified nature only by the fact of the transfer of money in the former case. Once intellectual property becomes, for most any practical purpose, nothing distinct from normal social interaction, the commodification of

[109] Indeed, Kant used this analogy explicitly and took its implications quite seriously, as will be discussed in Chapter 2, below.

intellectual property requires the enforcement of artificial monopolies over, essentially, topics of conversation.[110]

If an author releases the products of labour into such an environment, their labour may be used, but it cannot be said to be subjugated, for it is free to all, and remains available to the author, as well as anybody else who wishes to use it. Furthermore, the restrictions that would have to remain or be put in place in order to ensure that such labour could not be subjugated would represent a far greater subjugation of the public in general. By taking over the information publicly available, and by using it in non-proprietary form, we are not first and foremost expropriating or seizing the labour of authors. The more appropriate interpretation of this act is that we are contributing to the wealth held in common among labourers and working to free labour from corporate feudalism. In a Marxist light, this is the proper response to the current situation.

---

[110] Consider, for example, the fact that Adobe has felt the need to include the withholding of the right to read aloud from the purchasers of certain e-books. For each of their commodified texts there are specific license agreements regarding permissible actions. As of 13 December, 2000, the permissions for Adobe's encrypted and copy-protected of a Project Gutenberg version (online copyright-free, cost-free plain text file) of a public domain work, Lewis Carroll's *Alice in Wonderland*, read as follows:
"Copy: No text selections can be copied from this book to the clipboard.
"Print**:** No printing is permitted on this book.
"Lend**:** This book cannot be lent or given to someone else.
"Give**:** This book cannot be given to someone else.
"Read Aloud**:** This book cannot be read aloud." (Adobe Systems Inc. and Art Medlar. *Alice in Wonderland*. Formatting altered from the original.)

Adobe has since relaxed these permissions, now allowing parents who have purchased their version of this work to read it to their children. They no longer carry the Project Gutenberg edition, but now sell the Barnes & Noble World Digital Library edition for $3.56, with the provisions that the purchaser may not copy or lend the file to anybody, but may print the file and read it aloud. (Adobe Systems Inc. *Alice in Wonderland (World Digital Library Edition)*.) Many, likely most, other texts still cannot be read aloud, the exceptions being as best as I can determine those works which are in public domain and those which are explicitly children's books.

Current permissions for Adobe's version of this work may be found at <http://digitalmediastore.adobe.com/>. An archived screenshot showing the former permissions attached to Adobe's sale of this work is available at <http://www.pigdogs.org/art/adobe.html>. The version formerly sold by Adobe with the restrictive permissions already mentioned is still available at no cost, as it was when being offered by Adobe, from the same place Adobe got it – Project Gutenberg – at <http://www.gutenberg.net/etext/928>.

Complacency is complicity with the system, and action against the system may harm the interests of particular labourers insofar as they profit from this unjust system, but is on the whole an action that benefits labourers and the public in bringing about the downfall of this system. Even though it may bring harm to innocents, the innocents harmed are denied only profits made possible now only through social oppression, and to deny this benefit is a far lesser injustice than to allow such a system to self-perpetuate, and to thereby tacitly encourage others innocently to join forces against the public interest.

CHAPTER III

A UTILITARIAN ANALYSIS OF THE CRISIS IN COPYRIGHT

We reach now the grounds on which most battles regarding intellectual property rights are fought. Intellectual property legislation is – or at least was originally – intended to strike a balance between the benefit of the author and the availability of works in the public domain, and the most frequently discussed basis upon which this balance is to be struck is a fundamentally utilitarian concern: the public good. If we offer too little protection to authors, it is alleged that intellectual property will be created in a lesser volume, offering fewer contributions to the public domain, but if we offer too much protection to authors, the public will most certainly have a diminished ability to reap the benefits of the works encouraged thereby. The moral rights of the author will be discussed in the chapters to follow; here our only concern is whether and to what extent the public is benefited by government subsidization of intellectual property-based industries through restriction of freedoms of the general public.[111]

[111] In other words, I am here discussing the utilitarian argument for the artificial and legal right that is constitutionally allowed, as discussed previously. It may certainly be possible to argue for IPR as a kind of 'trumping right' of the kind discussed by Ronald Dworkin , wherein our right of exclusion over intellectual goods would be considered to be fundamental enough to social and individual utility that our *right* to do so ought to be defended even if the practice itself does not promote net utility, similar to, in his example, pornographic expression, in that "[I]f someone has a right to publish pornography, this means that it is for some reason wrong for officials to act in violation of that right, even if they (correctly) believe that the community as a whole would be better off if they did." (Dworkin, Ronald. "Rights as Trumps." Pg. 153) Such an argument, however, would have more in common with the Kantian and Lockean discussions than with the traditional utilitarian basis for intellectual property rights, for the type of claim is quite different here. We defend the right to free speech because it is fundamental to our individual happiness and having a free society (which is also fundamental to happiness, at least according to liberalism), whereas the traditional and typical utilitarian justification of intellectual property rights makes no such claim, but claims instead only that it is contingently in everybody's best interest to act in thus and such a way. Considerations of freedom of expression and self-development, as we will see in the following, seem to fall

Our first task here is to assemble the best possible utilitarian argument in favor of strong copyright laws. Once this is accomplished, I will argue that this utilitarian view does not appropriately consider the technological shift taking place in digital technology, and that, once this shift is taken into account, utilitarian considerations support a radical weakening or elimination of copyright. This solution is not a painless one, and is much less definitive on utilitarian grounds than on Marxist grounds. The latter portion of this chapter will be concerned with a discussion of the significant losses of utility implied by such a radical change in intellectual property rights, wherein we shall see that many – but not all – of the perceived losses are illusory.

The Anti-Copy Position

The basic utilitarian argument in favor of strong copyright law is already familiar to us: by offering a temporary monopoly, we as a society are able to use the profit motive in order to encourage the creation of goods which are then able to benefit the public both in their commodified form and, upon the expiration of the copyright term, their decommodified form as well. Through the artificial scarcity of copyright, the public gets software, computer games, literature, music, art, and film.

We can add to this basic argument in a couple of ways. First, we may observe that corporations are able to bring a level of economic investment so much greater than that of private parties creating uncommodified intellectual products that the type of product produced by the corporation is qualitatively different. Thus, such protection

---

against copyright protection rather than for it, and that is where we would find such a "right as trump" in this case, if it is to be found.

makes production of kinds of goods feasible that would not otherwise even exist. As the MPAA states the point in a more industry-specific manner:

> Moviemaking is an inherently risky business. Contrary to popular belief that moviemaking is always profitable, in actuality, only one in ten films ever retrieves its investment from domestic exhibition. In fact, four out of ten movies never recoup the original investment. In 2000, the average major studio film cost $55 million to produce with an extra $27 million to advertise and market, a total cost of over $80 million per film. No other nation in the world risks such immense capital to make, finance, produce and market their films.[112]

This kind of investment would not be feasible without American strong copyright protection in conjunction with large national and multinational corporations. Only this kind of investment allows for the creation of intellectual property that is on the cutting edge of technological achievement. Michael Eisner spoke at some length on this topic before members of Congress, in order to show why piracy is such an important problem in the digital age.[113] Eisner argued that the product requiring immense expenditure of the

---

[112] Motion Picture Association of America. *MPA | Anti-piracy*. To make this position work, the MPAA seems to assume that we will view our national economy's risk of such immense capital as in some way courageous and virtuous.

[113] Eisner was trying to impress upon the members of Congress how much money the studios spend, thus showing how serious an issue piracy is. This argument holds well only if we consider the actions of the studios as socially necessary. His words argue equally well against the current copyright system if we only bear in mind the vanishingly small utility that this huge societal expenditure of productive capability brought about, and the resources which would be freed if we did not protect and reward such wasteful activities, especially given that movies of far greater commercial, cultural, and entertainment value are regularly produced without the gaudy excesses here paraded. An excerpt of the relevant portion of the transcript is as follows.

"We now need to ensure that the necessary steps are taken to make sure that the success story of American intellectual property during the 20th century is not undermined during the 21st. At a time of burgeoning trade deficits, we must act to assure the security of one of America's few positive trade assets.

"To give you an idea of what's really at stake, allow me to return to prehistoric times. We left off the "Dinosaur" clip with this shot.

"[VIDEO - Freeze frame of pterodactyl flying over dinos]

movie industry can be very easily reproduced, and this presumably implies a responsibility on the part of our government to protect such investment (which investment, we might note, in the absence of the assumed validity of strong intellectual property rights would appear to be simply a truly stupid business decision). His implied argument is that, given the immense expenditure involved in the production of high-tech, high-cost films such as *Dinosaur*, we need to support strong copyright legislation if we wish to enable such goods to continue to be produced.

Similarly, it can be argued that without the possibility of making a living as a professional musician, only the wealthy would have the opportunity to develop their musical talents to a significant degree. Strong copyright laws help to ensure that people

---

"Even being held in freeze frame for you to scrutinize, this looks like an impeccable aerial shot following a pterodactyl as it flies over a herd of dinosaurs. Unfortunately, we weren't able to find any real dinosaurs to star in the film - and if we had, I understand they're terribly hard to train. So, we had to digitally birth them ourselves, bit by bit. It took more than four years, and it required the invention of proprietary technologies. First, we had to shoot the live-action backgrounds. To do this, we designed something we called a "dino cam."

"[VIDEO - Dino cam at work]

"As you can see here, it is a camera suspended by cables that are attached to two 70-foot towers. This allowed us to make extremely fluid tracking and crane shots that could quickly go from the height of a 50-foot brachiosaur down to the eye level of a lemur. Our camera team spent 18 months taking the dino cam to a range of locations that included Australia, Jordan, Venezuela, Hawaii, Western Samoa - and even so far as the Los Angeles County Arboretum in exotic Arcadia. Of course, there was no point to the "dino cam" if there were no dinos. So, we built our own digital animation studio back in Burbank and filled it with an extraordinary team of computer animators.

"[VIDEO - Dinosaur production montage to illustrate the following]

"These animators first created digital skeletons to better understand how dinosaurs were engineered. Then they layered on musculature so their creations could move realistically. Then there was the skin. Not only did it have to look completely real, but it had to have a sense of mass and weight that would convincingly relate the tremendous size of these animals. Then our animators took on another challenge that was completely unknown in the Cretaceous Era. Our dinosaurs would talk. So, each dinosaur needed to be designed in such a way that it could convincingly mouth words. All of this resulted in a tremendous amount of data that had to be processed. So, we built what we called a "render farm." This "farm" was a room full of computers running 24 hours a day to crunch all those billions of zeros and ones. . . . I'll resist the temptation to go on and on about the countless ingenious tricks that our animators and technicians devised to make this film, because my point isn't to promote the film. My point is that we have created a movie that took four years to make, during which 45 million megabytes were crunched - or enough data to fill 70,000 CDRoms - all to generate the necessary data for an 80-minute film - which, were it to get in the wrong hands, could be compressed onto a single DVD disk in a matter of minutes and instantaneously put on the Internet while the film is still in the theaters." (Eisner, Michael. *Address Before Members of the United States Congress*)

producing popular music are able to survive working only as musicians, thus allowing them sufficient time and resources to work at their craft, becoming better performers and composers. In this way, copyright provides a kind of public patronage, where the governmentally guaranteed monopoly allows for a level of profit which would not otherwise be available, and which allows artists to be supported in the way in which wealthy patrons would once have done.

We might also observe that the industrial production of culture employs a great many Americans, and thus supports many families and provides a driving force in our national economy. Intellectual products provide emotionally and economically rewarding work to a great many – not just studio and label heads, actors, and musicians, but also caterers, personal assistants, studio musicians, limousine drivers, costume designers, best boys, lawyers, and lobbyists – and are a major export commodity, most notably in the movie and music industries. As direct beneficiary and industry lobbyist Jack Valenti stated this point, following the release of *Copyright Industries in the U.S. Economy: The 2001 Report*, "The study confirms that the American copyright industries play a valuable role in the growth of the U.S. economy. By leading all other manufacturing sectors in their contribution to the American marketplace, *the copyright industries are this nation's most treasured assets*."[114]

Thus, in summary, the utilitarian argument in favor of strong copyright laws is as follows: strong copyright laws (1) provide goods to the public through an appropriation of the profit motive in exchange for an acceptable loss of social freedoms, (2) allow for creation of goods requiring a huge initial investment, which would not otherwise be

[114] Motion Picture Association of America. *STUDY SHOWS COPYRIGHT INDUSTRIES AS LARGEST CONTRIBUTOR TO THE U.S. ECONOMY*. Emphasis added.

produced, and (3) provide rewarding labour to many Americans, and represent a valuable export good for the U.S. market. I hold that these arguments were each once quite reasonable, but that to hold to them today is possible only if the implications of digital technologies are not fully understood. In the chapter preceding, I have already argued that the copyright bargain is no longer in the public interest because the products falling under copyright are ever more able to be produced with little or no commodification, and the social freedoms being traded off are becoming ever more basic and valuable; we have before us the task of reconsidering this argument in a utilitarian light.

The utility which the free use of the means of digital production represents is of wide extent, is fecund, and is relatively pure, for the use of these means of production allows for personal involvement in cultural production and expression, as well as being of value in the pursuit of business goals and free enterprise. If there is a substantial utilitarian argument in favor of laws which remove rights and freedoms from the public in order to benefit industry, the utilitarian basis must lie either in the great intensity of the pleasure afforded by digital products requiring immense initial investment, or in the great extent of the utility of the industry in terms of providing employment and contributing to the health of our national economy. As we shall see, however, it is not the case that either of these is sufficient for a utilitarian justification. In the first case, while it is not unreasonable to expect a lessening in the quality of goods produced in the absence of strong copyright law, this lessening of utility is not sufficient to counterbalance the costs brought about by such laws, and, in the second case, while it is true that the culture industries bring economic benefits both to many American families and to the American economy in general, these benefits are short term and unsustainable. As I will argue in

the following, maintenance of current copyright laws in the face of widespread availability of industrially competitive digital technologies trades current prosperity against future pains, for, given this situation, the system of intellectual property will break down eventually, and our economic dependence upon this industry will bring ruin upon us when that time comes, if we do not move to business models which are not in conflict with technological progress. Overall, copyright represents – I concede – a fairly wide spectrum of utilities. They are, however, quite impure, and are gained only through the sacrifice of other utilities which are more pure, more fecund, and have a wider extent, although they may be less intense.

The Pro-Copy Position

We will now construct a different utilitarian consideration of these issues, one that does not begin with a set of assumptions that are dependent upon opposition to technological progress. By beginning with an understanding of the social shifts implied by digital technologies, we will see a utilitarian analysis emerge which is far closer in its conclusions to the preceding Marxist assessment than that put forth by cultural industrialists. In going through this analysis, I will take care to note those places where significant losses of utility would take place in the radical diminution or elimination of intellectual property rights, and, in my reassessment of the issues of the intensity of pleasure of high-cost intellectual products, I will offer further details on the significance of those utilities which are most at risk.

My overall argument on utilitarian and economic grounds is as follows: (1) intellectual property based products are in a purely economic assessment best suited to

socialized production, the revolutionary nature of the industries notwithstanding, (2) when we consider the revolutionary nature of industrial applications of intellectual property we see that there are substantial new and emerging economic and utilitarian losses implied in the continued enforcement of these laws, (3) given these arguments, the fall of the current intellectual property regime seems inevitable, and the social and economic costs of rectifying the situation will only rise as we continue to ignore this fact, and finally, (4) the implementation of either a significant reduction or a complete elimination of copyright protection does not imply the complete collapse of the industries involved in or built upon the current capitalistic employment of these artificial monopolies, and we can already see emerging possibilities for a comparatively peaceable and non-destructive resolution of this contemporary and intensifying crisis which takes advantage of both socialized and capitalistic modes of production without dependence upon removing rights from the public. Any one of these arguments provides good utilitarian basis for criticism of American-style copyright legislation; taken together, they should show that any utilitarian or economic argument in favor of current legislation is either willfully shortsighted or based in at least partial ignorance of the situation at hand.

First, I argue that the economic structure of intellectual property sales lends itself best to public production and ownership, even considered independently from the social and legal costs necessitated by enforcement given public availability of means of production. Intellectual property based products, as they have a high fixed cost and a negligible marginal cost, are the type of good whose production costs are best socialized rather than left to the private sector. As Perelman points out

> Within [Economics Nobel laureate Kenneth] Arrow's logic, computer software is an ideal

> public good. Once produced, software code costs virtually nothing to duplicate. One can even read Arrow's analysis of the economics of information as an economic justification for the piracy of computer software; that is, software piracy, generously interpreted, approximates the price structure that pure neo-classical economics implicitly recommends, assuming that software vendors are marketing nothing more than the information embodied in the program.[115]

Rather than establishing a socialized method of production of intellectual products, the framers of our Constitution chose to leave options open by allowing Congress to use the 'copyright bargain' in order to incentivize private production of these essentially public goods.[116] It is notable, however, that they did not actually put this structure in place, but merely allowed for its possibility, and, furthermore, that even with this structure in place, we have yet brought about a socialized means of production of these materials through the National Endowments for the Arts and for the Humanities, through public funding of scientific research in universities and in organizations such as the human genome project, and so forth.

---

[115] Perelman, Michael. *Information, Social Relations and the Economics of High Technology*. Pg. 194.

[116] In addition to noting that these cultural goods conform to the traditional definition of public goods, as discussed by Perelman and Arrow above, we might also note that culture in general fits into this category, and that Steven Hetcher's argument in favor of norm-based provision of at least some certain kinds of public goods applies here. Hetcher argues "[p]ublic goods problems have an additional feature. The good cannot have the property that it is in the interest of some one person or a few persons to supply it. . . . For example, a wealthy environmentalist might find litter so repellent that she pays a crew to continually pick it up. The public good of an attractive environment is available to all, but it is not provided by a norm. Note that even the extreme measures of the wealthy environmentalist cannot provide the good as well as a simple norm [not to litter] can. For the crew can only do their job after the littering has occurred and thus after people have suffered its unsightliness." (Hetcher, Steven. *Norms in a Wired World*. Pg. 62) Where copyright maximalists argue that the public good problem can be overcome by incentivizing cultural production through profit motive, after which the market selects out those successful goods which satisfy public interest, we might similarly reply that the cultural needs of the public may be better driven by norm-based production, in which people would simply produce cultural goods, perhaps of less value individually, but both more efficient and effective collectively.

This two-pronged approach has worked reasonably efficiently until recent times, when, as we have already noted, the copyright bargain has dissolved into what the Marxist analysis called advanced accumulation, under which even the goods provided by socialized production are systematically privatized. If, as I have argued, technological advances have made the socialized approach more effective, we should not necessarily shy away from relying upon this prong to a greater extent, for it is not merely the easier and more efficient approach under current circumstances, but is indeed the approach more natural for these ideal public goods, and recent experience in public research shows that the knowledge pool available in the public sphere is sufficient to guarantee socially necessary labour[117] will be applied to meeting our needs in intellectual production.

Socialized production is the means most in line with the structure of intellectual property, it is a means which is at least reasonably efficient and effective in serving the needs of the public, and one that is already being employed to great effect. The loss of our other approach – that of privatized production – would in no way sound a death-knell for cultural production or bring on a dark age of scientific advance. Regardless, however, I do not hold that a purely socialized mode of production of intellectual property is the most desirable solution, as I argue below. For this reason, I do not regard it as necessary to my argument to show that socialized production would itself alone be sufficient to our

[117] I use this Marxist term because it exactly fits my intent and helps to maintain continuity with the prior discussion. We could equally well substitute the notion of diminishing returns, native to the utilitarian perspective, for I take it as uncontroversial that beyond a certain amount and variety of cultural goods, little utility is to be gained by superadded products, and also that, after a certain level of investment, increased production values represent a proportionally decreasing return in utility in the form of enjoyment to the consumer of the product resultant therefrom. I have found the Marxist term more effective; if the reader should disagree, and prefer that I should have used the concept of diminishing returns instead, I can but apologize, and ask the reader to see whether she agrees, as I feel she will, with my contention that, in every instance in the chapter to follow, a consideration of diminishing returns can effectively replace my use of socially necessary labour in such a way that it will lead to the same conclusions.

social needs: I hold only that socialized production is a fall-back plan which guarantees at least that some minimal level of production would be maintained, even if all else fails.

To move then to my second argument, consider that since the means of industrial production of intellectual property are now firmly in public hands, we must admit that any reasonable assessment of the future of capitalistic employment of intellectual property must include increased regulation and encroachment upon the everyday lives and personal projects of the public at large. The public is already, as noted above, denied many benefits of intellectual products. As technological advances continue, these denials will have to become more extreme as means of circumvention become more powerful and the benefits which these denials remove from the public will become greater as the productive abilities which would otherwise be in public hands increase in power and as their application continues to expand in breadth through the increasing range of uses of digital technology.[118]

Thus, given recent technological advances, the malappropriated copyright 'bargain' removes significant benefits from the many in order to benefit the few and the wealthy, and, furthermore, does so only by virtue of inflicting additional harms upon the

[118] Indeed, this enforcement problem is itself a reason on a utilitarian basis for us to at least greatly weaken enforcement and fines for copyright infringement. As Robert Goodin argues with regard to utilitarian justification of governmental aid in recompense of economic loss, there is a prima facie utilitarian interest in ensuring that status quo economic relations remain in place, simply due to the utility of economic stability in allowing persons to securely make and follow through on life plans, but, whereas "[n]o compensation is due [lawbreakers] to make up for any interruption to their life plans when those things are taken from them by due process of law," relatedly, "[t]he same may be true of certain risky ventures and unsettled situations. As a matter of policy, we guarantee the security of bank deposits but we do not underwrite the value of stock portfolios. The reason . . . is that people have no good grounds, of a statistical or still less a moral sort, for expecting high business profits over the long run, in a way they did . . have good grounds for expecting banks usually not to fail." (Goodin, Robert. *Utilitarianism as a Public Philosophy*. Pgs. 217-8) While the question of whether there is a moral reason to continue to reap monopoly rents is one that I hope to answer in the continuing discussion, we can note here as an aside that the ability to reap such profits is increasingly insecure, and perhaps for that reason increasingly best viewed as a risk-laden and speculative business venture, meriting a lessened level of governmental expenditure in enforcement, and a lessened moral claim to significant economic recompense from infringers.

many by the restriction of basic rights, by the breakdown of sociality, and by preventing the public from freely realizing their creative impulses. Given the likelihood that such advances will continue, we can expect both the benefits lost and the harms gained to steadily and continually increase. Whatever benefits the 'copyright bargain' still provides may be nearby and certain, but they are impure and not infecund, while the harms brought about through the 'copyright bargain' are nearby, certain, fecund, and wide-ranging.

Third, I argue that if we do not now halt the infringement of copyright legislation upon the public sphere, we are only postponing what seems inevitable. However painful such a move may currently be, this upheaval would be minimal, from a utilitarian point of view, compared to the pains of the overthrow of such restrictions at some later date, especially when combined with the pains of the oppression which would be suffered prior to this revolution. The legal separation of the masses from what they physically possess – the means of production within these industries – is not sustainable in the long term, and is sustainable in the short term only through repressive and socially harmful means.

In breaking these monopolies, jobs would be lost on a massive scale. The economy would suffer, both from the resulting unemployment, the lost export revenues, and shareholder losses. These losses are losses, as argued above, of ill-gotten goods, but they must nevertheless enter a utilitarian consideration. Counterbalancing these losses are the gains in software-importing countries, the empowerment of businesses in depressed or incompletely industrialized countries, and the gain of businesses everywhere – especially small businesses – in being able to use and develop non-proprietary and/or decommodified software. I will not pretend that these economic considerations will

equal out in the near term, but to ignore the current situation will only worsen the eventual losses, which our children will perhaps suffer, or which we will ourselves suffer, if the situation becomes more critical more quickly than I would expect.[119]

We do not, however, need to destroy copyright entirely. There are various ways we could lessen the negative impact of copyright laws while striking out on a gradual path toward decommodified intellectual production, at least some of which might still be effective solutions while being much less extreme and much more acceptable in the current climate than the complete elimination of copyright protection. These tend to fall into two general categories: either the enabling of an opt-out copyright community coupled with a modest reduction of copyright terms, or a shift to socialized production,

[119] While William Landes and Richard Posner do not take the revolutionary nature of the digital into account – they state "while we discuss a number of issues relating to intellectual property rights in computer software and to the impact of the Internet on intellectual property law, readers who believe that these are *the* central issues of that law today will be disappointed with our coverage" (Landes, William and Richard Posner. *The Economic Structure of Intellectual Property Law*. Pg. 7) – and thus do not recognize the continuing and worsening nature of this issue, they do nevertheless call into question the economic base that is at risk here. They claim, for example, that "The economic case for abolishing intellectual property rights has not been made. But neither economic theory nor empirical evidence enables a ringing endorsement of any complete body of intellectual property law other than trademark law, which protects "property" in only an attenuated sense. We do, however, find pretty solid economic support for a degree of trade secrecy protection close to what we have and for a degree of copyright and patent protection as well, but possibly a lesser degree than we have. . . . the economic arguments that we make for intellectual property protection are not based primarily on a belief that without legal protection the incentives to create such property would be inadequate. That belief cannot be defended confidently on the basis of current knowledge. The concerns we highlight have rather to do with such things as optimal management of existing stocks of intellectual property, congestion externalities, search costs, rent seeking, and transaction costs." (Op. cit., pgs. 9-10) The argument to follow will show how digital media is able to easily deal with congestion externalities, and search costs, and furthermore within digital media, the cost of enforcement of IPR and eliminating the artificial free-rider problem rise to a great extent, weakening their appeal to the inefficiencies represented by rent seeking and transaction costs (on the issue of optimal management of existing IP stocks, cf. Lawrence Lessig's very strong arguments against this from *Free Culture*, for example the discussion on the assumption of copyright, discussed below). In order to make this economic case, however, this discussion would have to be very different, and my purpose here is primarily one of applied ethics, not economics. I will claim only that if Landes and Posner are right about the efficiency of profit incentive in producing intellectual goods, and if I am right regarding the structure of digital media, then we can expect crash of copyright industries – if they fail to shift their business practices as I suggest – to be not only necessary but of a lesser impact than we might otherwise expect.

not only through institutions such as the NEA, but also by means of a media tax of some kind.

Larry Lessig has worked towards creation of an opt-out community of creators through Creative Commons. Creative Commons helps artists, musicians, photographers and authors release their work under lessened copyright protection by providing webspace and an online directory of works, as well as a variety of different legal licenses to attach to the works thereby protected. These licenses allow authors to legally waive their copyrights entirely, or to allow others to sample but not copy, or to allow others to copy or sample, but only for non-commercial applications, or to institute a variety of other similar lessened protections. Similar to the Creative Commons license is the Gnu General Public License (GPL), upon which the Creative Commons license seems to have been based in some ways. Lessig's interest in this opt-out approach matches neatly with his opposition to the CTEA; Lessig does not seem to be opposed in any way to copyright as such, but is concerned only that current legislation has overstepped proper bounds. While I am certainly inclined to agree with him, I still feel something more ought to be done, for I see the justification of copyright in general as very much eroded by the state of digital technologies and, thus, I hold that even an opt-in approach to copyright would still be against the public interest.

Other, more radical directions for reform include various ways of rerouting payment of artists through the tax code, thereby allowing for a free-market determination of the recipients of public funds, and thus maintaining market determination of social value within a system of socialized production. In Dean Baker's proposal along these lines, an artist may opt out of copyright protection, and register with the government as a

creative worker. Registered creative workers would then be paid a certain amount by the government, depending on the amount of Artistic Freedom Vouchers (AFVs) they received throughout the year. Each citizen would be given a fixed amount of dollar-equivalent AFVs per annum.[120] Other similar proposals, such as those from William Fisher[121] or Neil Netanel,[122] center around levying a tax on media players, such as CD-Rs, mp3 devices, and DVD drives. The revenue from this tax could then be sent to copyright holders, perhaps distributed proportionally by using ISP monitoring to determine which firms' intellectual properties are most often traded.

These proposals are interesting, and could perhaps resolve the current crisis in a relatively undisruptive manner. I might, in fact, add a similar proposal of my own: that the copyright term simply be diminished to twelve months in length. Software companies producing products for industrial application – design, data mining, analysis, etc. – would still be able to remain in business, for other industries would have a competitive advantage to be gained in the purchase of their newest and best materials,

---

[120] As Baker explains,

> "It is possible to design a system that compensates creative workers, while still leaving the choice of material to individuals (rather than some government commission), and eliminates the economic distortions associated with copyright. The basic point of such a system would be to compensate the creative worker at the point where they do their work, rather than compensating them after then fact for the work. If the creative worker is compensated at the point where he or she produces the material, then there is no need for copyright, the work can be transferred as quickly and freely as technology will allow.
>
> "One mechanism for this sort of compensation is a system of individual vouchers, where each adult can be given a fixed sum (e.g. 50 to 100 dollars a year), which can only be used to support creative or artistic work. These "artistic freedom vouchers" (AFV) could be paid out through the tax filing system, so that individuals could make their payments each year directly through their tax return."

(Baker, Dean. "The Reform of Intellectual Property," in *Post-Autistic Economics Review*. Issue 32, 5 July 2005. Available online at: <http://www.paecon.net/PAEReview/issue32/Baker32.htm>)

[121] Cf. ch. 6 of *Promises to Keep: Technology, Law, and the Future of Entertainment*, available online at: <http://www.tfisher.org/PTK.htm>

[122] Cf. "Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing," *Harvard Journal of Law & Technology*, vol. 17, Dec. 2003. Available online at: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=468180>.

which would be easier to produce without copyright restrictions which prevent one company from building on the work of another. At the same time, the public would be able to reap the benefits of these products, as they will enter the public sphere prior to being entirely obsolete, and, furthermore, the twelve-month term is one which the public at large would be willing to respect, unlike the unreasonable limits currently in place.

Nevertheless, this proposal, like the others just discussed, still retains the idea of copyright as a valid institution, whereas I have argued in the foregoing that copyright itself is no longer appropriate. While I may hold that strong American-style copyright protection is unjust, unjustified, and unjustifiable, this of course does not mean that some lessened form of copyright protection might not be acceptable in my view, but since my point here has to do with an indictment of our current mode of thinking, it is appropriate that I argue in favor of a more radical alternative. Thus, I will argue that the complete elimination of copyright protection is justified, although perhaps only tenuously, on a utilitarian basis. I argue this, not because it is what I myself might favor after careful consideration, but rather, first, because I believe that a surprisingly strong case can be made on utilitarian grounds for this radical alternative, second, because the strategies by which businesses could continue to thrive without copyright are still valid strategies for progress under any of the more moderate suggestions above, and third, because this radical suggestion allows me to avoid the intricacies of public policy matters and concentrate instead upon my point in this chapter, which is simply to show that utilitarian and economic concerns do not favor copyright as we know it. If I can show that even something so drastic as complete removal of copyright protection is a viable and preferable alternative to copyright law as we know it today, then I can safely assume that

I will have shown that more moderate solutions – if well implemented – must also represent an improvement on a utilitarian basis over the current copyright regime.

I am neither a lawyer nor a politician; were I either, I would argue for something rather different. As it is, my concern here is to show in which direction ethical considerations lead us. Discussion of the most prudent means of reaching these goals requires a great deal of detailed speculation and argument, and my goal here is to make a very general case. I shall leave the details to others better equipped to discuss them, and instead concentrate only on my argument that those who argue for strong copyright protection can find no clear support in ethical theory. As a philosopher, I regard this as my proper role in the debate.

This brings me to my fourth argument: even the complete elimination of copyright protection does not necessarily imply the complete collapse of copyright-based industries, and there are indeed emerging possibilities for our society to shift to production of non-commodified intellectual property with minimal economic loss and social upheaval. Furthermore, these new modes of production would be sustainable, for they would work with rather than against technological progress, and they would be justifiable, for they would not be based upon the removal of public rights.

If we were to take the radical step of complete removal of copyright protection, how would we deal with the loss of the software, music, and movie industries, in their present form? A revitalization and expansion of the National Endowment for the Arts, the National Endowment for the Humanities, and of the Public Works Administration could ensure that intellectual products that would otherwise no longer be created could be preserved, and jobs that would otherwise be lost could be replaced. Funding such a

massive governmental overhaul would no doubt involve an increase in taxation, but I believe this is superior to the alternative, would no doubt considerably less expensive for the majority of Americans and American businesses, and would additionally certainly be beneficial to the global economy, lessening the dependence of foreign companies upon American interests and simultaneously empowering those companies through the availability of high quality industrial software with a license of little or no cost.

This solution, however, has its own problems. Creation of expressive works through government funding opens the door to political repression of unpopular expressions, and removes, through politicization and bureaucratization, a significant degree of public determination of which works are worthy of social support. However, such public support would still be of limited but significant value in a copyright-free society, just as it is of limited but significant value in our current copyright-protected society. A copyright-free society, however, need not depend upon socialized production, for in the absence of copyright there are still substantial and ever growing opportunities for businesses to remain profitable and to expand in new directions. Sellers of intellectual goods would be able to remain in business by restructuring, either by moving to a shareware or sponsorship model of funding, or by moving their business from a product- to a service-model.

Shareware licensing represents a viable business model that is currently underutilized. Those downloading music or movies often state that if they find something they truly enjoy, they will buy the CD or DVD in order to support the artists, and we can see that this claim is not without a basis in reality by observing the successes, discussed in the following, of those who have benefited from such voluntary public

support. This is nothing but a spontaneous public employment of the shareware model over currently proprietary goods. Musicians have used online distribution networks in order to gain notoriety, John Mayer being the most famous example,[123] and established musicians gain from the online availability of their back catalogue, as Janis Ian has noted.[124] Many artists already produce most of their profits from live performances, and

[123] After becoming well-known in traditional distribution networks (radio, TV), Mayer continues to endorse the digital distribution of his music, live and studio. Cf. e.g.

"[Interviewer Chris McKay]: What should the audiences expect on the new tour?

"[John Mayer]: A show that is equally balanced between satisfying the people who heard about me when I was playing Eddie's Attic and the people who heard about me the week before tickets went on sale. It's going to be a little bit planned out instead of just getting up there and feeling it and playing whatever we want. It's going to be a little bit more ...the show's going to have a little bit more of a design. There's going to be an element to the show. Basically, there's going to be an acoustic set inside of the rest of the show. There's actually going to be an Inside Wants Out set that I'll do alone to kind of satisfy the people who wish they had the CD. I wish that I could sell it to them right now, but I'm bound and gagged by the man.

"CM: I'm sure you'll be the victim of bootleggings and file sharing...

"JM: I hope so." (Concertshots, *JOHN MAYER FULL INTERVIEW 12502*)

[124] From her widely distributed article "The Internet Debacle – An Alternate View"

"The premise of all this ballyhoo is that the industry (and its artists) are being harmed by free downloading.

"Nonsense. Let's take it from my personal experience. My site (www.janisian.com) gets an average of 75,000 hits a year. Not bad for someone whose last hit record was in 1975. When Napster was running full-tilt, we received about 100 hits a month from people who'd downloaded Society's Child or At Seventeen for free, then decided they wanted more information. Of those 100 people (and these are only the ones who let us know how they'd found the site), 15 bought CDs. Not huge sales, right? No record company is interested in 180 extra sales a year. But… that translates into $2700, which is a lot of money in my book. And that doesn't include the ones who bought the CDs in stores, or who came to my shows.

"Or take author Mercedes Lackey, who occupies entire shelves in stores and libraries. As she said herself: "For the past ten years, my three "Arrows" books, which were published by DAW about 15 years ago, have been generating a nice, steady royalty check per pay-period each. A reasonable amount, for fifteen-year-old books. However... I just got the first half of my DAW royalties...And suddenly, out of nowhere, each Arrows book has paid me three times the normal amount!...And because those books have never been out of print, and have always been promoted along with the rest of the backlist, the only significant change during that pay-period was something that happened over at Baen, one of my other publishers. That was when I had my co-author Eric Flint put the first of my Baen books on the Baen Free Library site. Because I have significantly more books with DAW than with Baen, the increases showed up at DAW first. There's an increase in all of the books on that statement, actually, and what it looks like is what I'd expect to happen if a steady line of people who'd never read my stuff encountered it on the Free Library - a certain percentage of them liked it, and started to work through my backlist, beginning with the earliest books published. The really interesting thing is, of course, that these aren't Baen books, they're DAW---another publisher---so it's 'name loyalty' rather than 'brand loyalty.' I'll tell you what, I'm sold. Free works."

"I've found that to be true myself; every time we make a few songs available on my website, sales of all the CDs go up. A lot.

the diminution or elimination of copyright laws would aid this by reducing the artificial scarcity in reproductions of music, thereby freeing expendable income to be spent on entertainment to be given over directly to artists. There is no reason that these methods of utilizing an open-source shareware model, already successful in some areas of music and software development, could not be adapted to other kinds of intellectual production. As public radio demonstrates, there is no need to ensure that each and every user pays for a service in order to be able to fund the provision of that service to all who wish it.

A sponsorship model of funding is another underutilized strategy, and one which provides a patch to one of the major problems of the shareware model: the risk inherent in producing a good on the shareware model which requires a significant financial outlay. An example of sponsorship funding can be found in Maria Schneider's Grammy-winning album "Concert in the Garden." The album was produced through artistShare.net, which offers artists the ability to offer fans the opportunity to sponsor the production of works, similar to the way in which institutions or individuals might commission a work, but on something closer to a grass-roots model. As Maria Schneider put it, "This project was funded with the help of my fans and distributed entirely through my own website. I feel very proud of taking that first step and incredibly grateful that it has proven to work so well!"[125] The artistShare model could equally well be applied to other areas of intellectual production, thereby supplementing socialized production, and allowing

---

"And I don't know about you, but as an artist with an in-print record catalogue that dates back to 1965, I'd be thrilled to see sales on my old catalogue rise." (Ian, Janis. *The Internet Debacle – An Alternate View*.)

[125] AllAboutJazz.com. *Maria Schneider - 4 Grammy nods and NOT ONE RETAIL SALE!* AllAboutJazz.com. 8 Dec 2004. <http://www.allaboutjazz.com/php/news.php?id=4785>

businesses currently dependent upon sales for income to find an alternate and sustainable source of revenue.

The second strategy outlined above – that of shifting from a sales- to a service-based business model – is also one that we can see already emerging in the marketplace, and is also one that is currently underutilized. Red Hat offers the clearest example of the potential for growth in this business model. Red Hat has enjoyed great success selling subscriptions, support, training, and customization of uncommodified, open-source software. As open-source and uncommodified software becomes more prevalent, we can expect demand for software servicing to increase perhaps precipitously, not only because of the obvious challenges of implementation or the obvious advantages of customization, but because of liability issues. One of the great benefits which software service providers are able to offer businesses is the ability to take a share of legal liability in cases of software-based damages, such as compromised client personal information or data loss. In this way, software service firms are able to act as informational insurance brokers, offering a greater degree of financial security, in addition to the improved data security which customization and a direct service relationships offer, as compared to centralized, mass produced software sellers.

MIT's OpenCourseWare provides a similar example of rethinking intellectual property as something to be serviced rather than sold. OpenCourseWare

- Is a publication of MIT course materials
- Does not require any registration
- Is not a degree-granting or certificate-granting activity
- Does not provide access to MIT faculty[126]

[126] MIT OpenCourseWare. *OCW Home*. <http://ocw.mit.edu/index.html>

When MIT first started this open-source approach to their course materials, which makes available online all manner of information from syllabi to lecture notes to tests, there was reportedly some confusion about why MIT would give away the very goods it was in the business of selling. As Hal Abelson explained at a recent academic open-source conference, MIT decided the information covered in a course was not a competitive good with enrollment within that course – MIT, in other words, does not view itself as a seller of information, but rather as a supplier of services, which include not only access to information, but also presentation of that information within a particular environment of other students, accessible and responsive professors, labs, discussion groups, and various other educational resources.[127]

An additional remarkable recent example of a business model taking advantage of a lack of intellectual property restrictions can be found in Cambia, an organization that explicitly aims towards supporting the creation and profitability of open-source biotech businesses.[128] Through cooperative ventures such as this one, it is possible to move

---

[127] Paraphrase of Abelson's comments in his presentation "Universities, the Internet, and the Intellectual Commons," given on the 20th of November, 2004, at the University of Maine, Orono, as part of the *Conference on the Intellectual Commons*. Conference details available at <http://library.umaine.edu/COIC/agenda.htm>.

[128] From their FAQ regarding their BioForge project:

"BioForge is the internet based-platform for the use of new "public-good binding licenses" (the BIOS license) a dynamic protected commons in which projects can be initiated and developed toward enabling technology for biological innovations of all kinds. Its implementation, using a secure collaborative software platform provided by CollabNet, can be seen at BioForge.net. . . .

"Scientists are often concerned about placing information and data in the public domain because it can be analyzed and improved by those with more resources, and those improvements can be patented, excluding others from using them during the term of the patent. To foster innovation that can be improved and used, the BioForge aims to build a protected commons in which you may share your ideas and data so that you and others can continue to build on them and improve them, but no user appropriates them and prevents other members of the BioForge community from building on them. The BioForge community is instead creating intellectual property within a protected commons, in which information may still be patentable and can certainly be used for making profitable products, but should be available to other creative members of the community to improve. Thus, users may patent improvements that they invent, but must agree not to enforce those patents against other members of the BioForge community.

"BioForge will be most successful in catalysing a large community of innovators to produce high

business interests to drive innovation rather than staking and defending claims over the territory of ideas. Similar models could be used in other areas of intellectual property, moving, for example, the monies currently spent on replicating drugs under patent by a rival company into research and development, which currently accounts for less of the expenditures of pharmaceutical companies than marketing. While this consideration brings us out of the realm of copyright law and into the realm of patent, it nevertheless points to the possibility of economic opportunities opened by the foreshortening of intellectual property ownership terms, as is, I believe, appropriate: actions in favor of the public good are not antithetical to business in general, only to business which is dependant upon exploitative practices. Free enterprise, after all, is based upon offering goods and services to the public in a competitive and open marketplace. Business becomes exploitative when it is allowed to destroy this competitive and open marketplace, which governmental protection of artificial monopolies achieves as surely as do the anti-competitive and illegal practices of actual monopolies.

Production Values and Mass Appeal

We will now consider the proposal to eliminate copyright protection in more detail, specifically with regard to how the public good would be affected by the

---

quality and relevant biological technologies for the empowerment of diverse problem-solvers in the developed and developing world. CollabNet's software platform and the pro bono contributions of IP practitioners are helping to ensure that we can secure these technologies in a new, protected, universally-accessible commons.

"As sourceforge.net has done for the open source software community, BioForge.net is a cyberspace meeting place for scientists and those who can apply science. It is a place to combine vigorous but positive debate, peer co-development concepts, curated and stewarded contributions, and public-good binding norms to forge unique collaborations and distributive problem-solving relevant to those unserved by current innovation practice. This will be a dynamic exercise, changing and morphing as it gains experience." (Irwin, Steve. *Frequently Asked Questions – BioForge*.)

elimination or radical reduction of intellectual property rights in the major specific copyright-based industries involved: software, music, publishing, and movies. A number of general points can be made about publicly produced, non-commodified intellectual goods: (1) such goods, whether shareware or freeware, are far more available in both scope and depth, that is to say they are available to a greater number of persons, for affordability is of little or no importance, and they are available to a greater extent to each user, for they can be edited (video), remixed (music), reprinted and quoted (text),[129] and customized (software), (2) such goods are likely to be of greater cultural and educational value, and generally more, so to speak, substantive, for they are produced with reference to the satisfaction of particular perceived human needs, not with reference to the appearance of the ability to satisfy particular perceived human needs, the motivating factor being use-value rather than exchange-value, and (3) such products have a fecund and pure benefit, for such products allow the user to create further works of a greater quality, and the benefit which the user obtains through such products is the user's own to realize in whatever way she wishes, unburdened by restrictive and unreasonable licensing.

More specific issues that must yet be addressed are those of whether the quality of such goods would be diminished by the removal of artificial monopolies and whether mass-appeal products would be lost or greatly diminished. One issue that I can count on my students to bring up in when we discuss copyright term reduction in my Computer Ethics courses is that the elimination or diminution of copyright would lessen the amount

[129] My proposal to severely limit copyright terms should in no way be understood to imply a loosening of intellectual property rights concerning plagiarism and proper citation. These moral rights, held by the author rather than the copyright owner, are discussed and defended in Chapter 4, below.

and quality of computer games available. This is almost certainly not the most important issue remaining to be addressed, but it does provide a nice introduction to a discussion of issues related to the loss of production values in cultural artifacts, a change which would bring about a number of trivial and acceptable losses, as well as some more serious harms, which, I will argue, are still preferable to the alternative.

The argument that the decommodification of intellectual products would bring a loss of big-budget, high production value games is not without merit. It does indeed seem that private, unpaid programmers, even when working collectively, are unlikely to spend as much time creating the 'wow' factor in their products. This should not be surprising, for the purpose of such visual spectacle lies largely in marketing. As far as the actual entertainment value of, e.g., computer games, we might do well to realize that the proprietary manufacture of games carries with it a strong motivation to create a product which looks entertaining and a lesser incentive, through repeat business, to create a product which actually is entertaining (Fig. 3), while shareware or freeware manufacture carries these incentives with reversed emphases. Similarly, commodification provides a disincentive for the creation of games that provide a great number of hours of gameplay, as well as for games

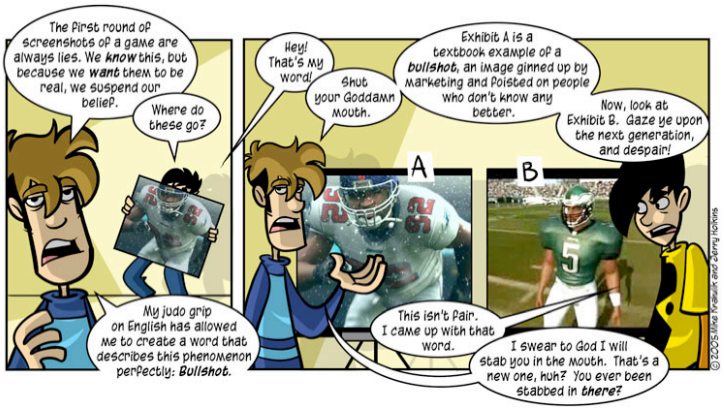


Fig. 3: "Potent New Lingo," Penny-Arcade.com.

This strip, from a gamer-oriented online free comic, is in fact credited for inventing the term "bullshot," now in common usage in the gamer community as a reference to industry overemphasis on marketing as compared to gameplay.

that have a high replay value. Uncommodified production of games encourages exactly the opposite. Industrial production of games thrives through the creation of high turnover and rapid consumption, leading to an emphasis on marketing to the expense of gameplay. Considerations of duration of entertainment favor decommodification.

This general observation aside, we may nevertheless suppose that freeware and shareware games would remain much as they are now, excepting that the availability of source code provided by non-prosecution of reverse-engineering would allow for the short-term utilization of proprietary graphics and object engines, which would allow for a far greater ease in creation of visually engaging and intuitively interactive virtual environments. Additionally, I see no reason to suppose that innovations in such engines can be emergent only from industrial development; we may look, for example, at the Open Dynamics Engine.™ As author Russell Smith, PhD Electrical and Electronic Engineering, describes it,

> ODE is a free, industrial quality library for simulating articulated rigid body dynamics - for example ground vehicles, legged creatures, and moving objects in VR environments. It is fast, flexible, robust and platform independent, with advanced joints, contact with friction, and built-in collision detection.[130]

This consideration of the quality of games brings us directly to a consideration of the quality of movies, television, and other types of video goods. The issues of intensity of enjoyment in items in these media are very similar to those just discussed, but are here perhaps more serious. The economic investment within a single project here are both more extreme and more vital than in the above cases, by which I mean to say that the

[130] Smith, Russell. *Open Dynamics Engine – ODE.* SourceForge. 24 Mar 2004. <http://q12.org/ode/>

creation of an intensely pleasurable action movie, for example, tends to involve a far greater economic investment, and that the intensity of the pleasure of a movie of any genre seems to be fairly dependent upon the level of economic investment. Nevertheless, I believe the case just outlined still applies.

In the case of products having a non-economic, expressive motivation, sufficient means are publicly available to ensure creation of such products, and, again, such types of pleasure are more likely to be accentuated in the absence of an economic incentive than in its presence. In the case of those whose primary motivation is entertainment, we can address separately those whose appeal is emergent from humor or cleverness and those whose appeal is emergent from more capital-intensive elements, such as special effects, production values, or star power.

In the first case, we may note that, just as in the case of dance or pop music, there is already an inherent desire for such material which will equally well motivate the creation of material of comparable quality to that being commercially produced, if not of a more intensely enjoyable variety, due to the greater ease of creation of derivative works such as parody or satire, and a greater specificity of such forms of entertainment than would be allowed by forms of entertainment required by economic considerations to strive for mass appeal. Such humorous and clever creations are already being created and made available in the absence of commodification. We may look for example at advertisement or product promotion funded creations such as the entertainment products provided by websites like homestarrunner.com, which produces animated shorts, or fray.com, which publishes short stories online. Additionally, there are sites which have no product line and which work entirely on a volunteer basis on the part of the authors,

such as channel101.com, which produces short, relatively low resolution television-style shows free of charge, along with all the other examples already discussed in §4 above. With increased cheapening and technical improvement of video technology, we can expect such privately produced uncommodified intellectual products to increase in both number and variety. I must leave it to the reader to decide whether these works created by private parties are as entertaining as those which television and movie corporate bodies are currently creating, but I believe it is at least fair to say that they are in contention, especially when we keep in mind such commodified recent works as *When Animals Attack*, or the immensely expensive *Waterworld*.[131]

The second case – those entertainment products whose merits lie primarily in capital-intensive elements such as special effects, production values, and/or star power – is somewhat less clear, but I believe there is still no compelling utilitarian reason for the governmental enforcement of an artificial monopoly over such materials. It is undeniably true that the decommodification of such materials would result in a loss of intensity in a variety of the pleasurable qualities of products in these media, most markedly in the visual spectacle of movies, such as that presented recently in the *Lord of the Rings* trilogy. This loss is lamentable, but is, firstly, temporary, for such production values will continue to cheapen as technology progresses, and is, secondly, minor in comparison to the public benefit precluded by the expenditure of resources in the service of allowing for such production values. If we wish to avoid such a loss of production value, we should realize that to do so through the enforcement of an artificial monopoly is, effectively, to subsidize these industries, and such subsidization would be better accomplished through

[131] See also the prior discussion of *Dinosaur*, pg. 70 fn. 105.

direct means – such as increased funding of the NEA – than through restriction of the rights of the public. But, again, such a loss of production value is only a short term consequence.

Special effects and production values will continue to cheapen, and have already begun a process of radical cheapening through the incorporation of digital technologies into the process of creation of media of these kinds. We may look the admittedly paltry special effects available to non-commercial producers evidenced in the products of channel101.com in order to see that such technologies are already in public hands to an extent that allows for their use in the absence of guarantee of monopolized commodification. This example is a far cry from current industrial "light and magic" in the movie industry, but it shows that decommodification would represent a temporary setback in the quality of such material, not a permanent loss of quality of such material. We may, further, note the existence of the mildly creepy Miss Virtual World contest,[132] which provides evidence that the creation of virtual actors represents a sufficiently minimal financial outlay as to allow for private parties to speculatively create such actors in the absence of specific funding from ongoing projects. When technology has cheapened to the extent that the creation of such actors under freeware licensing becomes feasible, the creation of full-scale visually rich CGI movies will become sufficiently cheapened as to allow for the creation of such material in the absence of economic incentive, considering that open-source 3-D virtual object engines are already available, as previously discussed above.

[132] Cf. missvirtualworld.com

I would, however, be remiss in treating production values as a merely technological issue, for there are certainly kinds of technical expertise that cannot simply be replaced by technological advancements. My concern here has to do primarily with high production value live performances, such as Broadway shows and orchestral or operatic performances, which have high production values both in terms of the actual expense of putting on such a performance and in terms of the extensive and specialized training necessary for classical performers. These kinds of performance are somewhat shielded from the economic damage which decommodification of their reproduction might bring, due to their fetish-character and auratic qualities, but are still certainly at risk in such a change, due in no small part to their current decline.

As Adorno noted in his analysis of the American orchestra, a good deal of the value of high-art performances inheres in their fetish-character, that is, their value in terms of social cachet. I believe the same can be said of Broadway shows, or even of shows widely known from their renown as Broadway shows, such as *Cats*, *Rent* and "*Les Miz*," albeit in different social spheres. Such shows are expensive to put on, but this is not due to necessary expenses. The purpose of high production value in such works is not to improve the quality of the performance, but rather to produce a kind of artificial scarcity, for a truly extravagant production ensures that tickets will be expensive, which produces their fetish-character. Mechanical reproduction is unable to capture this fetish-character, and a mp3 or mpeg of such a performance carries even less of the value of the original performance than a CD or poster, for at least these physical artifacts can be left in conspicuous places in the home in order to establish group-membership or to prompt a desired conversation.

Auratic qualities are much more present in orchestral or operatic performances, if only for the reason that these performances, unlike Broadway-type shows, are not marketed as "what everybody else is seeing this season." Such classical performances still have a fetish-character for many of their viewers and devotees, but have a significant value for listeners that is not absorbed by and cannot be reduced to this fetish-character. For this reason, classical performances are much more likely to be harmed by video and audio reproduction.

It is, however, my view that the damage that the decriminalization of digital reproduction might possibly do to the classical music industries is already being done without such decriminalization. Most classical performances do not involve new works, nor do they involve new and innovative approaches to established pieces; the emphasis is instead upon excellence in traditional pieces and traditional methods of performance. This makes the reproduction of one version of a work a competing good with not only all other reproductions of other versions of that work, but also any performances of that work. Indeed, were anything truly unusual or unexpected to occur in the performance of most classical music, this would be viewed as a defect in the performance rather than an added and unique value. Thus, the business of live classical performance is dependant entirely upon the auratic qualities and fetish-character of such performances, further discouraging innovation and change. The majority of those who go to see Beethoven's *Fifth* expect to see it performed with the truest possible fidelity, which means, in effect, that they expect to have it sound exactly as they expect it to. The decriminalization of digital reproduction may perhaps exacerbate the decline of classical performance, but it certainly does not cause the basic problems, and, it seems to me, could at most be

accused only of accelerating a process whose fated end is already known: classical performances are dependant upon wealthy patrons, and should the wealthy stop supporting them, then we shall have to content ourselves with classical music not played by full-time classical musicians and the classical music that has already been recorded.

The issue of particular concern in this consideration is not so much whether it will be possible to see as good a version of *Don Giovanni* as one can today – although this concern is certainly a valid and pressing one – but rather whether the decentralization of the means of musical reproduction and the concomitant decommodification of musical expression might bring about a collapse in the conditions required for classically trained musicians. If musical production were to become less a career for the few and more an avocation for the many, as I would like to see, it is most certainly less likely that people will find it a good expenditure of their time and effort to learn to play or sing in strict traditional forms, or that they should be motivated to reach a level of perfection in their performance which most listeners would not even be able to appreciate. A virtuoso requires either a market or a patron – unless she should happen to be independently wealthy and driven by internal reasons to constantly strive for perfection – and in the absence of these conditions we can expect to lose performers of a certain highest caliber. This, in my mind, is an acceptable loss if it is a necessary outcome of popular access to the means of cultural production. As regrettable as it may be to lose a form of artistic performance, when we trade such a means of expression over against the rights of the public, rights must take precedence over such privileges in this case just as in the prior case of the castrati, whose ethereal voices we are not likely to ever hear again. If we must lose a facet of artistic expression in order to cease depriving the public of its ability

to give rise to new expressions using means already in their possession, then we will mourn the loss of such ill-gotten goods, and artistic expression will continue in new directions not dependent upon the loss of public rights. Regardless, the current system does a remarkably poor job of supporting artists who will develop their talents, or indeed, supporting artists with talent at all. As evidence of this we can look at the failing municipal symphony orchestras and the few independent artists and composers doing interesting work, as compared to the extremely lopsided concentration of wealth which the culture industries give over to those who best fit their marketing needs, regardless of talent.

Nevertheless, as far as the issue of star power is concerned, we should not underestimate the importance to the public of movie, television, and music stars. There is, firstly, a kind of public value that is to be found in celebrity itself. Celebrities allow us to have a common peer group with our acquaintances and coworkers with whom we might otherwise have no common community. This seems to be psychologically important to us, providing a proxy for the small pack for which we have an evolutionarily established need, and of which the fragmentation required by a modern bourgeois society necessarily deprives us. Their being well paid is however of little or no importance for their ability to serve this psychological and social function; fame is consequential here, and this can be achieved equally well by authoring under copylefted licensing as under proprietary licensing.

With regard to the quality of new music being produced, I feel little needs to be said which is not already implied by the foregoing discussion. The primary intensity of pleasure which most people take in music results more from the artist's desire to

communicate than from the artist's and producer's desires for profit. Removing the profit motive will ensure that music is produced primarily out of a desire for communication and self-expression, and can thus be expected to generally improve the intensity of pleasure to be found in music available, even though the volume of new music may well decrease. We may further note that the loss of technical quality brought about by decommodification would be, in the same way and for the same reasons as discussed with relation to movies and games, both minimal and short lived.

I should not, however, ignore the objection that there is a kind of enjoyment that may be supposed to underlie the success of various kinds of vapid popular music. This enjoyment can be attributed in part to a kind of addictive satisfaction that appeals to the baser desires of crass sexuality and misguided violence. However, while I do believe in the propriety of Mill's disdain of "baser pleasures," I will neither prove or assume that such "baser pleasures" can be ignored, for my position is in no way lessened by equal consideration of these pleasures, and this consideration is, regardless, foreign to the basic argument which I intend to here address.

Were I to ignore the "baser pleasures" of pop music – dancing, mindless entertainment, and the appeal of sexual and violent material – the intensity of pleasure of music would be already well addressed by the comments above, but it is yet to be shown that these baser pleasures can be equally well satisfied in the absence of governmentally enforced artificial monopolies over musical products. Consider first that musical products produced by artists seeking to create wares with real communicative products may well do so in such a way that such baser desires may still be equally well satisfied by such products. There is certainly no obvious reason to suppose that the presence of

content of other sorts precludes the satisfaction of such baser desires, and, indeed the mass and base popularity of currently available music containing deeper expressive content is often enough equivalent to that not containing deeper content as to offer a reasonable guarantee that the loss of economic incentive would not result in the loss of material having a mass or base appeal. We may look here at Liz Phair, U2, Rage Against the Machine, Reel Big Fish, and Radiohead, each of which produce music which contains appeal of both these kinds. I trust the reader will be able to come up with other examples, perhaps very different, which appeal to her own emotive enjoyment of differing types of music.

Even were there to be some kind of intrinsic value in musical products having mass or base appeal that does not contain any deeper value which would serve as a more significant personal incentive for artists to create such items in the absence of economic incentives, artists may be motivated to produce such items on their own merits. We have, after all, already conceded there is a real desire for the consumption of such items and the means of production of them is publicly available, and, furthermore, such items are produced often enough as advertisements for non-musical products. If there is an intensity of pleasure which is to be found exclusively in such songs as Billy Craddock's "Rub It In"[133] or Bob Seger's "Like a Rock,"[134] which is incompatible with or lessened by their expressive content, this would certainly be better served by origination in the advertising industry rather than by subsequent cooptation by this industry. Thus, I see no

[133] Used in commercials for Glade Plug-Ins

[134] Used in commercials for Chevrolet ; e.g. <http://www.clipland.net/Summary/501001217/>

reason to suppose that the intensity of pleasure of musical products is in any way dependent upon their commodification.

The human desire to dance and sing is so basic that there is no reason to suppose that the creation of pop or dance music would in any way be threatened by decommodification. However, there are other products of mass and base appeal that may be threatened by such a shift, most of all action movies and romance novels. The loss of such products would, I believe, represent an elimination of the expenditure of socially unnecessary labor, these products preying to a certain extent upon the lesser angels of our nature. I do not deny that these products serve real human needs, but I do feel it entirely obvious that there is a glut of such products that creates more demand than would otherwise be present. Regardless, such works would continue to be made without artificial monopolies, and, as noted above, however real our need for them might be, I see no reason to subsidize the creation of such works by limiting the rights of the public.

A final note should be made regarding a utilitarian consideration of the artists themselves. Artists who profit from the current copyright regime are to some extent those whose products have great mass appeal, but to some extent they are merely those whose value derives from the industry itself. In the case of at least one major label the star musicians are dressed and given haircuts by the label and their media statements of e.g. "what this song means to me" are written by committee,[135] and the songs themselves are of course often written by others. The so-called "musician" becomes nothing but a

[135] Personal communication on condition of anonymity. Source is an office worker in a major record label headquarters.

locus of the forces of marketing, and is far closer to being a product assembled than an innovator profiting from her own hard-won development of native talent.

These paper dolls reap a very large proportion of the wealth that our current system makes available to artists. For this reason, I feel it is fair to say that those artists who benefit significantly more from the current system than they would under a weakened copyright scheme – namely top 40 artists – are often undeserving, and almost invariably represent a poor allocation of social investment, for a number of reasons. First, their being freed from monetary concerns is not likely to allow them to develop in order to bring better products to the public, for their success has less to do with talent than with marketing and production. Second, their wealth is more often then not discharged into conspicuous consumption rather than in a way that might serve some more significant purpose. Third, their success usually provides a very poor role model for our youth. Furthermore, these artists gain their benefits at the expense not only of the public in general, but also at the expense of other artists specifically, for their artificial market dominance achieved through the consolidated radio broadcast market in combination for a *de facto* pay-for-play agreement with the labels ensures that there is no significant incentive for commercial outlets to play anything other than those few artists that the few labels have decided to push upon the few radio stations, leaving the artists who are not among their number to be heard only in concert venues and college and public radio. Nevertheless, I do not dispute that in the absence of strong intellectual property rights there will likely be less opportunity for artists to support themselves through intellectual production; I argue only that this lessened wealth will be better distributed and will better serve the good of the many, and that the artists who benefit from the current copyright

regime do so at the expense of the majority of artists, and at the expense of artistry. In general, these considerations apply most obviously to actors and musicians, but we will first consider the position of the programmer.

Richard Stallman asks

> If software were free, there would still be programmers, but perhaps fewer of them. Would this be bad for society?
>
> Not necessarily. Today the advanced nations have fewer farmers than in 1900, but we do not think this is bad for society, because the few deliver more food to the consumers than the many used to do. We call this improved productivity. Free software would require far fewer programmers to satisfy the demand, because of increased software productivity at all levels:
>
> •Wider use of each program that is developed.
>
> •The ability to adapt existing programs for customization instead of starting from scratch.
>
> •Better education of programmers.
>
> •The elimination of duplicate development effort.
>
> Those who object to cooperation claiming it would result in the employment of fewer programmers are actually objecting to increased productivity. Yet these people usually accept the widely-held belief that the software industry needs increased productivity. How is this?
>
> "Software productivity" can mean two different things: the overall productivity of all software development, or the productivity of individual projects. Overall productivity is what society would like to improve, and the most straightforward way to do this is to eliminate the artificial obstacles to cooperation which reduce it. But researchers who study the field of "software productivity" focus only on the

> second, limited, sense of the term, where improvement requires difficult technological advances.[136]

Thus, Stallman argues that the loss of programming jobs is appropriate, and for the greater good. I argue the same with regard to jobs in music and movies. The music and movie industries are bloated: they take up far more than the socially necessary labour in order to perform their proper function within society.

To speak with regard to specific artists who gain significant benefit from the culture industries, we may note that their success often has little to do with their positive contributions to the greater good, if any. Increasing consolidation among media delivery corporations along with increasing destruction of alternative media, such as internet radio, ensures that business interests determines the cultural products available, and contours the public taste to industry offerings. Those who are the chosen of the culture industries are delivered to success by means of ensuring that others are denied success. There is no dearth of material, and success is more often the suppression of competition than it is success over the field.

The elimination or radical diminution of copyright protection would be a benefit to artists in their success as artists, although it would work against them in their role as businesspersons. The aspiring artist would surely be denied the dream of the vast wealth which currently goes along with great media success, but this dream is a harmful one, for those who fail to attain it – by far the majority – may be given over to jealousy, bitterness and economic destitution besides. Moreover, those who succeed do so at the expense of others and represent a misallocation of resources, for their value to society is far less than

[136] Stallman, Richard. *Why Software Should be Free*.

the value that the current system accords them. Additionally, breaking up the trusts of the media industries and decentralizing cultural production would represent a new very real and socially beneficial hope for aspiring artists. Without a centralized and monolithic culture industry, those who do not wish to commit their lives to their intellectual production would be able to produce, distribute, and have a significant opportunity of gaining attention without having to sell themselves to a large corporation, for the economic incentives which create artificial scarcity through oversaturation would no longer be present. Without the concentration of media currently in place, there would be little point to having almost every radio station in almost every market share the same playlist. With a lessening of profit margins, the labels and studios will shrink, the superstars will fade, and the vast majority of artists will finally have a chance for recognition and attention, and our cultural landscape will be the better for it.

Concluding Remarks

Most utilitarian considerations of the 'copyright bargain' fail to consider the issue appropriately. There is a balance that needs to be struck between the rights of authors and the rights of the public in order to maximize the public good. What we often fail to consider is that once the means of production of intellectual products are publicly available, the enforcement of artificial monopolies necessary in order to protect the granted artificial rights of the authors becomes a burden upon the public. These artificial rights, being granted on a utilitarian basis rather than a deontological basis, lose their justification when their public benefit disappears, as it has in the public availability of the means of production of copyrightable goods. This loss of public benefit occurs as (1) the

rights of the public become ever more infringed upon by the granting of such enforced privatization, and as (2) the public benefit formerly served by such privatization is ever more realizable without the granting of such artificial rights. It is by these means that the copyright bargain, in our current digital world, turns from bargain to theft, from beneficial partnership to extortion.

If we do not now radically lessen or eliminate proprietary copyright laws, the situation will only become more unjust and harmful, socially, culturally, and economically. We have no reason to suppose that the progress of technology will abate. To preserve our current laws will only increase the short-term prosperity of the few at the expense of the short and long term prosperity of our society as a whole.

CHAPTER IV

A KANTIAN ANALYSIS OF THE CRISIS IN COPYRIGHT

It is sometimes said that copyright protection can be given justification on a Kantian basis.[137] Upon examination it is abundantly clear that American copyright law, when applied to digital objects, has no recourse to Kantian grounding, although Kantian arguments will continue to support certain moral rights of authors, most notably those concerning plagiarism and proper attribution.

In the following, I will first briefly address the justifications of copyright laws given in German, French, English, and American legislation. At this point, I will demonstrate that Kantian ethics will support each of these given justifications, but will not support the majority of contemporary applications of these laws to digital objects, regardless of whether we turn to the *Groundwork of the Metaphysics of Morals*, to the *Metaphysics of Morals* itself, or to Kant's essay specifically on copyright, "On the Wrongfulness of Unauthorized Publication of Books."

There are two basic foundations of contemporary Euro-American copyright law; the utilitarian foundation, exemplified in the laws of England and the United States, and the Kantian or authors' rights-based foundation, exemplified in the laws of France and Germany. The stated goals of the English and American legislation is to ensure that an author creating a work of value is given a temporary right to determine its reproduction, thus to ensure that (1) one creating such a work is not thereby economically

[137] Cf. pg. 4 fn. 8, above, for a sampling of works offering such citations.

disadvantaged, and that (2) the creation of such works is thereby encouraged, such that these works may benefit the public in general. In contrast to these concerns, French and German legislation centers on the idea of the personal and creative aspects of such works, and the rights of the author to ensure the integrity of their expression.

It may be argued that a Kantian justification for the extension of copyright over digital objects in line with the Anglo-American legislative tradition may be given on the basis that if we consider the maxim "I intend to copy this digital object," we shall find that it is not universalizable, due to the fact that if everybody copies digital goods, nobody will be able to afford to produce further originals to copy. Furthermore, it may be argued that doing so does not respect the creator of the digital object as an end in herself, but treats her merely as a means. A Kantian justification of the extension of copyright over digital objects more in line with the Continental legislative tradition might be given in the argument that such objects are often or always expressive in nature, and the protection of the data that constitutes an authorial expression is required if the integrity of that expression is to be adequately protected. These arguments will be addressed in this order.

Arguments from the Categorical Imperative

First, we ask whether the maxim to copy my neighbor's software is universalizable. It seems to many people, apparently, that such behavior is equivalent to theft,[138] but this ignores something very important about the nature of digital objects.

[138] The rallying cry of the Business Software Alliance (BSA), the Software Publishers Association (SPA), and their affiliates – "Piracy is theft!" – has in fact been codified in American law under the No Electronic Theft Act of 1997 (the NET Act). This act, besides implicitly equating copyright infringement and theft, strikes a provision in 17 U.S.C. § 506 which formerly required commercial advantage or private financial

Consider theft of some useful analog object from my neighbor. When I take valuable property, I am thereby given a benefit, and my neighbor loses an identical benefit. In one version of the famous Kantian argument, I steal from my neighbor and thereby gain a loaf of bread, which is fine and good, but we discover that this is unfortunately not universalizable, for if everybody stole bread then those in possession of bread would stop leaving it out in the open where people can get at it, or perhaps bakers would stop making it altogether.

When I copy my neighbor's digital object, I am thereby given a benefit, and my neighbor is none the less for it, for digital objects are similar to an idea, as we have already discussed, in that "he who receives an idea from me, receives instruction himself without lessening mine."[139] If everybody copied their neighbors' digital goods, this in itself should in no way cause any reticence on anybody's part. Thus, copying digital objects is not in conflict with the categorical imperative with regard to the direct treatment of my neighbor.

---

gain as a criterion for a criminal infringement offense. Under the law as modified by the NET Act, criminal infringement may be established by the willful reproduction or distribution of copyrighted material of a total retail value exceed $1000 within any 180 day period or by the receipt of commercial advantage or private financial gain. Further, the NET Act added a creative definition to 17 U.S.C. §101, stating that "the term 'financial gain' includes the receipt, or expectation of receipt, of anything of value, including the receipt of other copyrighted works." This definition states that the receipt of copyrighted works is an illegal financial gain, thereby legally establishing the claim that piracy is a form of theft. Cf. United States Department of Justice. *The No Electronic Theft ("NET") Act: Relevant portions of 17 U.S.C. and 18 U.S.C. as amended (redlined).*

[139] Jefferson, Thomas. Op. cit.

Now, of course, nobody could reasonably argue that such an act would directly be theft from one's neighbor.[140] This consideration will nevertheless be of value, for it represents a fundamental difference between digital objects and other goods.

Perhaps, although my neighbor is not directly harmed by my action, I am nevertheless using others because I am neglecting to support authors of digital objects, and the corporations that employ them, in order to allow for the continued creation of such products. The question then is whether, if everybody copied digital objects, new digital objects would continue to be created.[141] The answer here is quite clear, as I have argued above – there would be no shortage of digital objects. It is true that the

---

[140] Although this could be, and has been, unreasonably argued. For example, Michael Eisner argued exactly this before Congress, comparing copying a movie to electronically removing money from somebody's bank account. The relevant portion of Eisner's address is as follows:

"Today's Internet pirates try to hide behind some contrived New Age arguments of cyberspace, but all they are really doing is trying to make a case for Age Old thievery. When they hack a DVD and then distribute it on the web, it is no different than if someone puts a quarter in a newspaper machine and then takes out all the papers, which, of course, would be illegal and morally wrong.

"The pirates will argue that this analogy is unfair, maintaining that all they're doing is cracking a digital code. But, by that standard, it would be justifiable to crack a bank code and transfer the funds from someone else's account into your own. There's just no way around it - theft is theft, whether it is enabled by a handgun or a computer keyboard." (Eisner, Michael. *Address Before Members of the United States Congress*.)

[141] Of course, here I am only directly addressing the contradiction in conception portion of the categorical imperative, not the portion addressed to a possible contradiction in the will. The reason for this is that, as we will see in the next section of this chapter, this was the basis of Kant's own argument. Nevertheless, we may briefly note that the other portion of the universalization procedure can also be easily passed. As Paul Guyer summarizes it, the categorical imperative finds a contradiction in the will when we endorse policies which, although they involve no logical contradiction, "nevertheless frustrate one's rational will in a more general way: as a rational agent, one *should* will that adequate means to whatever permissible ends one might someday formulate should be available." (Guyer, Paul. *Groundwork to the Metaphysics of Morals*. Pg. xxxiv) Here, the most important permissible end is that of communication with the public (as we will, again, see explicitly in the next section), and in the absence of sufficient public availability of mass communication technologies, this would entail a responsibility not to copy, but, again, in our current situation, we are not deprived from the means of such communication if we universalize the maxim to copy. Furthermore, if we wish to change the permissible end in question to profiting from the public rather than communication with the public, this seems to reduce the issue to one of preferences and personal choice, for it is clear that this is no longer a necessary end (although it is a permissible one), and that we could consistently decline such an end without a contradiction in the will. Thus, in this case, the appropriate Kantian conclusion is that, if you wish to profit from your own communications, it is inappropriate for you not to recompense others for theirs. This conclusion strongly implies a shareware model, and in no way justifies a right of exclusion over copies and derivative works.

profitability of large-scale digital object production would be greatly diminished, but this is not the only source of digital objects. The software released as freeware, under GNU general public license[142], under open-source BSD license,[143] or otherwise copylefted,[144] is sufficient to replace a wide variety of proprietary programs, and the availability of the source code of proprietary programs would provide ample resources to increase the number of such non-proprietary applications, and quite likely at a rate greater than the rate of increase provided through proprietary licensing.[145] Similar licensing is being applied to other digital goods, such as music, video, and written works, such as this dissertation, and many authors feel that these licenses are preferable than standard

[142] GNU (a recursive acronym: GNU's Not Unix) offers a number of different licenses both for the distribution of their own software and for the free use of other distributors. The GNU public license (GPL) is perhaps most well known, but all are centered upon requirements that authorial attribution be maintained, that disclaimers be maintained, that modifications be properly attributed, and that the code not be made proprietary. Aside from this, unlimited reproduction and modification are allowed with few additional restrictions. GPL available at <http://www.gnu.org/copyleft/gpl.html>.

[143] BSD (Berkeley Software Distribution) distributes software (most famously BSD Unix) under a license which cedes the right to freely reproduce in whole or in part, with or without modifications, provided that a copyright notice and a short list of disclaimers is preserved. License template available at <http://www.opensource.org/licenses/bsd-license.php>.

[144] Copylefting is a term used by GNU, but which applies to licensing procedures outside of their own. The defining quality of a copyleft is that it is a copyright license which requires that the right to copy and modify of both that program and copies and modifications of that program should be left to the end user. A variety of such licenses have been articulated by GNU (Cf. Free Software Foundation. What is Copyleft?), but other notable copyleft licenses have emerged, such as digital media attorney and copyright activist and legal expert Larry Lessig's CreativeCommons licensing system (Cf. Creative Commons. Choose a License).

[145] It's also interesting to note that Kant may not be particularly upset about the loss of some cultural goods which seem to be at risk, as per the previous discussion in chapter 3, especially e.g. popular music, action movies and video games. As Allen Wood encapsulates Kant's discussion of our enjoyment of artificial beauty, "[the empirical interest in artificial beauty] constitutes a merely "social joy" often only feeding the "obstinate vanity" and "ruinous passions" of civilized people," and "taste tends to degenerate into mere fashion, which consists in giving oneself airs, pretending to participate in genuine communication with others as an independent voice, but in fact merely bowing to custom or novelty for their own sakes." (Wood, Allen W. *Kant's Ethical Thought.* Pg. 304) Profit-motivated cultural production seems to be driven towards making our judgements of taste subject to fashion in this way, due to the industrial interest in creating the "brand-name" superstar image as a marketing strategy.

copyrighting,[146] which tends, in many important ways already discussed, to discourage innovation and creation. Thus, we see again that the categorical imperative, in its first formulation, is not at odds with the maxim to copy my neighbor's digital objects.

It may be objected that the maxim should read instead "I intend to copy *proprietary* digital objects whenever convenient," for the above confuses the copying of freeware or copylefted goods, which is equivalent to accepting a gift or continuing a conversation, with the piracy of commercially produced content, which is arguably equivalent to theft.[147] To deal with this objection, I will first consider another valid point: it is, after all, illegal to copy proprietary digital objects.

Certainly I have a duty to respect the law, as I cannot consistently will that everybody should break the law whenever they find it convenient to do so. This does itself establish a Kantian argument against so-called piracy, but not by means of any particular aspect of the action itself. If the copying of proprietary digital goods cannot be shown to be wrong outside of the fact of its illegality, we should conclude that it is wrong

---

[146] See, for example, the directory of works (images, movies, audio, text, and web sites) at Common Content <http://commoncontent.org/>. As the site summarizes, "Common Content is a catalog of works licensed in the Creative Commons , available to anyone for copying or creative re-use. The catalog includes 1917 records, many of which are collections which include hundreds or thousands of other works." (Creative Commons, *Common Content*)

[147] Another way to make the same objection, but on the basis of contradiction in will rather than in conception (a line of argument which is secondary for reasons already explained), would be to say that I am using an inappropriately Rawlsian verstion of Kant. As Barbara Herman argues, "[w]hat the Rawlsian strategy fails to capture is a critical element in the Kantian conception of moral judgment. For Kant, the embeddedness of the person in the particular is the natural and necessary starting point of moral judgment. Rawls's strategy is drawn from the context of the "original position," where agents . . . are to decide together on the duties, obligations, and principles by which they will live. The Kantian moral agent, if the standard examples can be taken as a guide, comes to need a procedure for moral judgment when he is tempted to make an exception for himself from known moral precepts." (Herman, Barbara. "Mutual Aid and Respect for Persons." Pg. 139) Were the question here merely about my own moral choices, I would agree with this charge, but the question at hand is one of law and public policy, and thus any reasonable Kantian consideration will have these Rawlsian overtones. Nevertheless, I will eventually concede that on a Kantian basis, what the categorical imperative tells us is that, as embedded subjects, we do have a duty to respect the law, even as the Kantian justification for that law is eroded. In this way, I hope to insulate myself against this objection.

in the way that going out of doors without a burqa may be wrong: to transgress here is to neglect a duty to be lawful but is otherwise acceptable behavior, and thus the law itself should be open to question.

It is the same when we consider the maxim to copy proprietary digital objects. The creators of these digital products had a reasonable expectation of profit from its resale, and to deprive them of that profit which the law guarantees them would be unlawful conduct, and, indeed, would treat the programmers and corporate managers and CEOs as a mere means, for they no doubt have life plans which are dependent upon the income which our unlawful behavior would deprive them of. We are in a system wherein they are playing by the established rules, and for that reason, we have a duty to hold up our end of the bargain.[148]

This is of course a conservative Kantianism, for it would be possible to argue that we never consented to this system in any meaningful sense, or perhaps that one ought not respect legislation which requires behavior which is immoral in a Kantian view[149] (an

[148] Although of course, it's a bargain that we, as individuals, did not make, and this is a *post hoc* justification of it. This is much more troubling if we take a view of the categorical imperative through the kingdom of ends, where we appear more clearly as legislators, and must consider more explicitly which general policy we wish to endorse (as there are certainly other duties at stake here, such as the movement towards enlightenment as discussed below). As Thomas Hill argues, "What is needed to respect the dignity of one person often seems contrary to the dignity of another. To avoid moral paralysis it is necessary to try to adjudicate such problems at a higher level of deliberation, reflecting on what general rules and policies best reflect the dignity of all. Tough some problems may be unresolvable, by incorporating the value of human dignity into the broader legislative perspective of the kingdom of ends we introduce constructive ways of thinking about the troublesome cases." (Hill, Thomas E., Jr. *Respect, Pluralism, and Justice*. Pg. 49)

[149] On whether Kant would go along with such an argument, cf. e.g. Christine Korsgaard's "Kant on the Right to Revolution," in which she argues that "The just person respects the rights of humanity, and for this reason respects the government that enforces those rights, and the juridical condition that makes their enforcement possible. But it is by no means obvious that a person who makes the rights of humanity his end would never, under any circumstances, oppose the extant government." (Korsgaard, Christine M. "Kant on the Right to Revolution." Pg. 317) While Korsgaard is explicitly concerned with the revolutionary, the case of the conscientious lawbreaker is not irrelevant to the discussion.

allegation which I hope to have shown the basis for already[150]), but let us be generous and let this point stand. It is at any rate a Pyrrhic victory, for it can be shown that not only does the transgression of this law violate no other duty, but furthermore that this law no longer fulfills the obligation for which it was created.

When we look at the goals stated in the enactment of copyright law in the Anglo-American tradition, the justifications are (1) to ensure that the author of a useful expression is benefited, or at least not ruined, (2) to encourage the creation of such works, and thus (3) to benefit the public in general.[151] If we ignore, for a moment, the existence of digital media, we can see a Kantian justification of such legislation. If we consider the creation of a useful and successful complex expression, say a manual of some kind, the production of this expression presumably requires a fair amount of labour while its reproduction requires relatively little. In this case, if we universalize the maxim of freely reprinting useful expressions, we see that this practice would not be sustainable, for

---

[150] My argument here is that the enforcement of current legislation requires immoral behavior, not that the legislation itself requires immoral behavior. Others have argued the latter point, as I have myself in Chapter 2, above. Most notable is Richard Stallman's arguments that copyright in fact requires us to act immorally and erodes basic social goods, an argument which he brings together by the slogan "cooperation is more important than copyright." (Stallman, Richard. *Why Software Should Not Have Owners*). A more modest line is taken by Helen Nissenbaum, who argues that at least some situations exist in which it is moral to ignore copyright. (Nissenbaum, Helen. "Should I Copy My Neighbor's Software"). The most comprehensive argument along these lines of which I am aware is Michael Perelman's *Steal this Idea*, which, as I have already mentioned, makes a book-length case against intellectual property rights in general (Perelman, Michael. *Steal this Idea*).

[151] As stated in the Statute of Anne, 1710:
"Whereas printers, book sellers, and other persons have of late frequently taken the liberty of printing ... or causing to be printed ... , books and other writings without the consent of the authors or proprietors of such books and writings, to the very great detriment, and too often to the ruin of them and their families; for preventing therefore such practices for the future, and for the encouragement of learned men to compose and write useful books; may it please your Majesty ..." (Parliament of England. *The Statute of Anne*. Reproduced in part in Appendix A, below)

As stated in the Constitution of the United States, Article 1, §8, clause 8:
"[The Congress shall have power] To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries" (Federal Convention of 1787. *The Constitution of the United States of America*)

nobody would find it worth their while to create such expressions. Thus, copyright law does have a clear and significant moral basis, especially if we also consider that to discourage such expressions would constitute a purposeful impediment to the realization of human potentialities.[152]

When we again take digital media into consideration we see that the law no longer has this moral basis for the claim that the free reprinting/reproduction of digital goods can now be willed as a universal law. With regard to the obligation to assist the creator of such useful expressions, (1) above, we may easily note that the expenditures required in the creation of such complex expressions as software are no longer prohibitive, as evidenced by the fact that many such creators choose not to receive recompense for their labour even when given the legal means to do so, and, further, that such recompense, in the cases of software and music at the least, is not limited to retail sales in its origin, but can profitably be shifted into the service economy.[153] This itself is enough to establish that objectives (2) and (3) no longer require these laws, but it is worth noting that there is also significant evidence that copyright over digital objects is not only unnecessary but actually detrimental, discouraging both innovation and the public benefit which is to be gained from such innovation.[154]

---

[152] Cf. Kant's third example in the second section of the *Groundwork*, 4:423, pgs. 74-5.

[153] In the case of music, this is obvious. In the case of programming, it is possible to make a similar shift by charging for distribution, repair, customization and so forth. Cf. Free Software Foundation. *Selling Free Software*, and Stallman, Richard. *Why Software Should Not Have Owners*. The basic distinction here has been memorably and elegantly explained as, to paraphrase, the difference between free as in "free speech" and free as in "free beer." Free software means that you can do what you want with it, which certainly includes making money by packaging, distributing, installing, servicing, and so forth.

[154] Cf. Nadel Mark S. *Questioning the Economic Justification for (and thus Constitutionality of) Copyright Law's Prohibition Against Unauthorized Copying: §106*, and Perelman, Michael. *Steal this Idea*.

Kantian reasoning supports the law in those cases wherein human potentiality is encouraged by its enforcement, and does not support the law in cases wherein such enforcement places a damper upon the realization of human potential. While Kantian reasoning does support adherence to the law regardless of its rationality when considered in the abstract, the significant point here is that Kantian reasoning does not support the law itself in many cases, and that the support which Kantian reasoning gives to the law has nothing to do with theft and private interests,[155] but has to do instead with human flourishing and public benefit.

Arguments from *The Metaphysics of Morals*

German copyright law can be traced back to Kant's article "On the Wrongfulness of Unauthorized publication of Books" and the related arguments in *The Metaphysics of*

[155] To reinforce this, we can take a look at a contemporary consideration of the Kantian justification of possession. The relevant portion of the Kantian argument is that regarding an "intelligible possession." The contrast, as Guyer explains this Kantian term, is "between 'empirical possession,' or physical detention of an object – holding it in one's hands or sitting on it – and 'intelligible' or 'noumenal possession,' a right to control its use and disposition that does not depend upon current physical detention of it, but instead ultimately consists in an agreement among possible users of the object concerning who will have the right to it." (Guyer, Paul. "Kant's Deduction of the Principles of Right." Pg. 44) Surely intellectual property is a very abstract and attenuated form of this already artificial and abstract form of possession, covering as it does derivative and non-rivalrous copies, but even were it not so, we would see the Kantian justification for such possession deeply troubled. Kenneth Westphal, finding that Kant failed to give a good explicit argument for such possession, returns to the categorical imperative in order to shore up Kant's position, formulating what he calls the Maxim of Arrogant Willing: "Whenever the sole sufficient means to achieve my ends happen to include things possessed by others, I will nevertheless regard them as being under my control and will use them to achieve my ends." This maxim, he argues, is not permissible, for "the only possible human conditions under which the Maxim of Arrogant Willing could be universalized do not obtain in human life." I certainly agree (at least within non-communist societies) when we address this towards the intended object of his discussion – our abstract rights over our house when we are not in it, our parked bicycle, our money in the bank, etc. I bring this up only to make the point that this route is not one which would help to establish intellectual property rights, for we find that two of the three possible but impermissible ways of making the Maxim of Arrogant Willing do in fact obtain in the contemporary digital world of intellectual goods, the first by the nature of digital objects, and the third by the will of persons within open-source and free-ware communities: "1. Resources are in fact plentiful enough that among the things *not* possessed by others there were always sufficient means for achieving one's ends," and "3. One allowed others freely to make use of things one possesses whenever those things were among the sole sufficient means to their ends." (Westphal, Kenneth. "A Kantian Justification of Possession." Pgs. 100-101.)

Morals.[156] As the basis of France's *droit moral* of the author is functionally equivalent to the basis of Germany's laws, I will not separate them out too carefully.

In the aforementioned article, Kant explains that "my argument is contained in a syllogism that establishes the *right of a publisher*, upon which follows a second syllogism that should refute the *claim of an unauthorized publisher*."[157] In the first of these syllogisms, titled "Deduction of the right of a publisher against an unauthorized publisher," Kant argues that writing does not constitute a plain object, but is instead also a form of speech, and thus an expression of the will of the author. Then there is the fact that the author chooses a certain publisher, a certain provider of the "*mute instrument for delivering the author's speech to the public*,"[158] which can then carry out the will of the author in the name of the author. This means that another publisher which would publish without authorization would express the will of the author in his speech, yet would do so against the will of the author, for the author *cannot* authorize more than one publisher to carry his expression to the public.

It is this last point that is least obvious and most crucial. Specifically, the argument is that the author cannot authorize more than one publisher as the instrument of their speech for "it would not be possible for an author to make a contract with one publisher with the reservation that he might allow someone besides to publish his

---

[156] *The Metaphysics of Morals* does not add anything of significance to these issues to his earlier comments in "On the Wrongfulness [etc.]." For those who wish to compare the two, or who do not have easy access to the less common essay, the argument addressed in following is presented in briefer form in *The Metaphysics of Morals*, §31, II., 6:289 - 91, pgs. 437-8.

[157] Kant, Immanuel. "On the Wrongfulness of Unauthorized Publication of Books," pg. 29.

[158] Ibid., pg. 30.

work,"[159] because the two would "carry on the author's affair with one and the same entire public, [and] the work of one of them would have to make that of the other unprofitable and injurious to each of them."[160] So, the author as a matter of *fact* cannot *actually* authorize two publishers to publish their speech, for no publisher would agree to such an arrangement. It is for this reason that another publisher cannot assume the permission of the author, for that permission cannot be granted, and thus they would bring the speech of the author to the public against the possible will of the author.

The second syllogism is somewhat less complex. The question given is whether the lawful ownership of an object containing the reified speech of another itself implies the right to use that object as one pleases, including the reprinting of the reified speech therein contained. Kant argues against this that

> there is indeed bound up with ownership of a thing the negative right to deny something, to resist anyone who wants to hinder me in my use of it as I please; but a *positive right against a person*, to require of him that he perform something or render me some service, cannot follow from mere ownership of a thing.[161]

Further, since the distribution of reified speech is in fact merely the author's use of publishers in order to perform a speech-act, the ownership of a copy of such a speech cannot imply the right to reproduce its contents, for this would imply the right to force the author, so to speak, to perform again their speech-act.[162] This positive right cannot be

---

[159] Ibid., pg. 31.

[160] Ibid., pg. 31.

[161] Ibid., pg. 32.

[162] This is almost exactly put into law in the French *Intellectual Property Code*, *Art. I. 111-3*:

granted, but requires a separate contract, which, as described above, cannot possibly be granted.

After this, Kant makes some closing remarks about the rights of the public against a publisher if they do not print a manuscript after the death of the author, or if they should publish it in an incorrect or incomplete manner. These are concerns that are taken very seriously in French law in particular, which protects the integrity of the expression against any distorted republication in perpetuity.[163]

What is remarkable about this argument is that the claim of the authorized publisher against the unauthorized publisher is guaranteed by the impossibility of the consent of the author; an impossibility but not a logical impossibility. We see, further, that with regard to digital objects this is no longer an impossibility, and thus the majority of the argument simply does not apply to digital objects.

In order to verify that the precariousness of this argument is not an illusion of translation, let us now look more carefully at the original passage.

> [W]eil alsdann jeder von beiden, dererste Verleger und der sich nachher des Verlags anmaßende (der Nachdrukker), des Autors Geschäft mit einem und demselben ganzen Publikum führen würde, die Bearbeitung des einen die des anders unnütz und für jeden

---

"The incorporeal property right set out in Article L. 111–1 shall be independent of any property right in the physical object.

"Acquisition of such object shall not vest in the acquirer of the object any of the rights afforded by this Code, except in those cases referred to in the provisions of the second and third paragraphs of Article L. 123–4 . These rights shall subsist in the person of the author or of his successors in title who, nevertheless, may not require the proprietor of the physical object to make such object available to them for the exercise of those rights...." (Assemblée nationale française. *Intellectual Property Code (Legislative Part)*)

[163] Both German and French copyright law make provisions of this kind, but there is clearly a greater emphasis in French law. Cf. *Intellectual Property Code (Legislative Part)*, Pt. 1, Book I, Title II, *Art. L. 121–1*, in Appendix A, Compare *Copyright Law (Urheberrechtsgesetz)*, Part 1, Section IV, 2., Art. 14, in Appendix A.

> derselber verderblich machen müsse; mithin ein Vertrag des Autors mit einem Verleger, mit dem Bordehalt, noch außer diesem einem andern den Verlag seines Werks erlauben zu dürfen, unmöglich sei; folglich der Autor die Erlaubniß dazu keinem andern (als Nachdrukker) zu ertheilen befugt gewesen....[164]

Here it is indeed quite clearly stated that the impossibility (*unmöglichkeit*) of the authorization of an additional printer (*ein Nachdrukker befugen*) is demonstrated by the fact that they would speak to the same public (*mit einem und demselben ganzen Publikum führen*) and therefore make the actions of each unprofitable and pernicious for the other (*die Bearbeitung des einen die des anders unnütz und für jeden derselber verderblich machen müsse*). In the absence of these conditions, it seems that there would be no particular reason why an author could not authorize multiple parties to be printers of her expression.

Now we ask: Is it possible for an author of digital objects to authorize multiple publishers? Yes, it clearly is, for publishers need not be in competition with one another, though they speak to the same public, for they may not charge for the product at all. This conflict only arises with regard to proprietary digital goods.

Furthermore, Kant argues that "if someone so alters another's book (abridges it, adds to it, or revises it) that it would even be a wrong to pass it off any longer in the name of the author of the original, then the revision in the editor's own name is not unauthorized publication and therefore not impermissible."[165] It seems this Kantian text

---

[164] Kant, Immanuel. *Von der Unrechtmäßigkeit des Büchernachdrucks*, pgs. 407-8.

[165] This idea is also present in both French and German law. Cf. *Intellectual Property Code (Legislative Part)*, Pt. 1, Book I, Title I, Ch. II, *Art. L. 112-3.*; in Appendix A, and *Copyright Law (Urheberrechtsgesetz)*, Part 1, Section II, Art. 3; in Appendix A.

does not support the kind of closed-source proprietary license currently prevalent, but instead supports only a license no more restrictive than GPL,[166] for if an adaptation is potentially sufficiently differentiated to be appropriately considered an independent work, then to prohibit the use of the first expression in the creation of an *ex hypothesi* different expression would clearly be outside of the realm of the author's rights.

So it seems that here, again, Kant may be used to support the judgment that it would be wrong to copy proprietary digital objects, for this could potentially be the act of a distributor acting in the name of the author, but against the will of the author. Nevertheless, it must be noted that Kant's theory does not support closed-source licensing, and even directly ridicules the very idea of contributory infringement.[167] So, on the basis of these arguments, it seems that Kant would require us to respect the chosen distributor of an expression unless the author authorizes multiple or unlimited distributors, and also that we should allow access and use of code, but not redistribution in the absence of attribution.

This understanding of how Kant's writing might be applied to our current situation is strengthened by his comments on toleration – for example, from "What is Orientation in Thinking?":

---

[166] That is, not proprietary, and not so-called "shared-source" For a comprehensive discussion see Brooks, Leon. *Picking up Your Marbles*.

[167] In a surprising footnote, Kant asks rhetorically "Would a publisher really venture to bind everyone buying the book he publishes to the condition that the buyer would be prosecuted for misappropriating another's goods entrusted to him if the copy sold were used for unauthorized publication, whether intentionally or even by negligence?" (Kant, Immanuel. "On the Wrongfulness of Unauthorized Publication of Books," 8:80, pg. 29fn.) This now may constitute 'contributory infringement,' wherein one may be found guilty of copyright infringement simply by offering assistance to the practice of copyright infringement in situations in which the abetter knew or ought to have known of the infringing activities. This was a primary charge in the Napster case (United States Court of Appeals, Ninth Circuit. *A&M Records v. Napster, No.00-16401, D.C. No. CV-99-05183-MHP*), and has since been used in threats directed at individuals, universities, and ISPs.

> Certainly one may say, "Freedom to speak or write can be taken from us by a superior power, but never the freedom to think." But how much, and how correctly, would we think if we did not think as it were in common with others, with whom we mutually communicate! Thus one can well say that the external power which wrests from man the freedom publicly to communicate his thoughts also takes away the freedom to think – the sole jewel that remains to us under all civil repression and through which alone counsel against all the evils of that state can be taken.[168]

Of course, the copyright industries do not "wrest from man the freedom publicly to communicate," but nevertheless, this shows Kant's commitment to community in pursuing the development and realization of the potentials of man. As such, this supports the judgment implied by the above, that Kantian reasoning supports the GPL, that is, requires proper attribution as respecting the will of the author contained within the expression, but does not support the right to exclusion which copyright creates, for this puts unnecessary fetters upon our intellectual interconnections.

The case here is even stronger if we follow Onora O'Neill's argument, utilizing the quote above, that Kant's idea of tolerance requires us to engage with others; to view intellectual goods as communications rather than mere expressions. As she argues, "it is surely controversial to see the speaking, writing and related activities of human beings as primarily expressive, something that can in principle be purely private, indeed solitary, rather than as primarily communicative," and, further, that "[e]xpression is parasitic on communication, and all successful communication requires some sort of recognition or

[168] WOT, VIII, 144;303, as quoted in O'Neill, Onora. *Constructions of Reason*..

uptake by others."[169] If this is the case, then our toleration of others is not merely a negative duty, but requires us to take steps to ensure that communications be made publicizable. Now, surely, Kant is thinking of more vital subjects of public reason than the majority of works subject to copyright protections, but surely artistic works are not wholly irrelevant to the process of enlightenment, and, regardless, this is certainly in keeping with his general claim that "[a] constitution allowing *the greatest possible human freedom* in accordance with laws by which *the freedom of each is made to be consistent with that of all others* . . . [is] a necessary idea, which must be taken as fundamental not only in first projecting a constitution but in all its laws,"[170] for if it is not necessary for me to limit others from publication and use of my works in order to communicate with the public, the greatest possible universally held freedom of action with regard to that communication is expanded to include freedoms of reproduction and alteration, assuming proper respect to the author's moral rights are shown through attribution.

But is a proprietary digital object even appropriately described as a willful expression? In the case of software, for example, is it the expression of the designers of the proposal, or of the programmers *en masse*, or of the 'corporation' itself? In the case of music, is it the expression of the musicians, the producer, the mixer, or the songwriter?[171] Regardless of the answer to this question, it seems that Kant would not support the treatment of such amalgamated expression any differently, for, even though it does not have the same unity of expression as a single-author work, it is nevertheless true that all

[169] O'Neill, Onora. *Constructions of Reason.*. pg. 31.

[170] Kant, Immanuel. *Critique of Pure Reason.* Pg. 312, A316/B373.

[171] The recording label is of course not even in the field of those who might claim moral rights arising from the expressive content of such works.

parties involved in the expression have in some sense chosen that employer, and thus, that employer is to that extent the proper distributor of the product.

These Kantian arguments offer very strong support for a recent proposed EU directive[172] on the prosecution of copyright infringement. In this proposal, commercial infringement upon commercial copyright is prosecuted, whereas non-commercial infringement upon commercial copyright is not prosecuted, thus, effectively, ensuring that competing distributors be prevented as before, but that non-competitive distribution be allowed. As to the true lack of impact of such non-commercial distribution, we can look to the continued and perhaps even *expanded* progress of the music industry in the midst of a dearth of such non-commercial distribution.[173]

Another earlier directive, the EU Copyright Directive (EUCD, Directive 2001/29/CE), would not only make the individual user responsible for such infringements, but would also include an anti-circumvention measure (EUCD Article 6[174]) akin to the infamous U.S. DMCA 1201(a),[175] thereby prohibiting the production of

---

[172] Cf. Evers, Joris. *EC allows music downloading in antipiracy proposal.*

[173] Articles range from taking the blame off of mp3 exchange (cf. Gold, Michael. *The CD Sales Slump: Not Simply because of mp3*) to the claim that mp3 exchange increases CD purchase (cf. Bowman, Lisa. *Study: Napster boosts CD sales*).

It may be objected that this effect will not be as strongly felt with regard to software as with mp3s. This may be true if the maintenance or increase of sales is consequent upon people downloading as a self-imposed trial period, after which time they legally purchase the music if they should determine it worthwhile. It is however certainly the case that much of this music is downloaded, not in consideration of or instead of purchase, but instead out of curiosity, passing fancy, or amusement, and at no point reflects an interest sufficient to motivate a purchase. This is clearly the case with much pirated software – many in possession of illegal copies of large and expensive technical and professional programs, such as Adobe Photoshop or AutoCAD, have no real need or use for such programs, and do not expect to have a real need for them in the future. Thus, the download in no way delays or displaces a potential purchase.

[174] Directive 2001/29/EC, Ch. III, Art. 6 reads in part:
"1. Member States shall provide adequate legal protection against the circumvention of any effective technological measures, which the person concerned carries out in the knowledge, or with reasonable grounds to know, that he or she is pursuing that objective.

novel expressions through the modification of proprietary expressions. This directive became enforceable on the 22nd of December, 2002, although only Denmark and Greece have done so at this time.[176]

Concluding Remarks

We noted at the outset some of the ways in which Kantian arguments might be used in order to defend copyright protection of digital objects. Through a careful examination of the situations involved in the production, protection, and reproduction of digital objects, we see that Kantian moral theory defends only a quite limited version of copyright of digital objects, one which (1) is open-source, (2) requires attribution to the author(s) and reviser(s), if any, whenever possible, and which (3) confers exclusive rights

---

"2. Member States shall provide adequate legal protection against the manufacture, import, distribution, sale, rental, advertisement for sale or rental, or possession for commercial purposes of devices, products or components or the provision of services which:
"(a) are promoted, advertised or marketed for the purpose of circumvention of, or
"(b) have only a limited commercially significant purpose or use other than to circumvent, or
"(c) are primarily designed, produced, adapted or performed for the purpose of enabling or facilitating the circumvention of,
"any effective technological measures. " (The European Parliament and the Council of the European Union. *EUCD Directive 2001/29/EC*)
Compare with U.S. DMCA 1201(a) below.

[175] As stated in the Digital Millennium Copyright Act of 1998,
‘‘§ 1201. Circumvention of copyright protection systems
‘‘(a) VIOLATIONS REGARDING CIRCUMVENTION OF TECHNOLOGICAL MEASURES.—(1)(A) No person shall circumvent a technological measure that effectively controls access to a work protected under this title....
‘‘(2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that—
‘‘(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;
‘‘(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or
‘‘(C) is marketed by that person or another acting in concert with that person with that person’s knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title." (Congress of the United States of America, One Hundred Fifth. *Digital Millennium Copyright Act*.)

[176] Cf. Association Electronique Libre. *EUCD-Status*.

to control distribution upon a publisher only in those cases in which it cannot in practice be willed that digital objects of that type be made without enforced economic support by consumers; i.e. when the author cannot consent to publication by more than one party. I can think of no real recourse to this third condition on the part of manufacture of digital objects.

How is it that the same principles support what seems like a much different conclusion as soon as the medium of expression is digital code rather than, e.g., the printed word? The answer is found in the first case we considered – the difference between copying my neighbor's digital object and stealing my neighbor's food. If the neighbor is left in need of food, she must earn money and then seek out the producers of such supplies as she needs. To make more copies of a digital object requires virtually no labour, and no significant investment except the starting costs that allow for any use of digital objects at all.

In other words, the difference is the availability and cheapening of the means of production. To copy digital objects requires nothing but hard drive 'space' – it is as if it were made of nothing; we need only find someplace to put it. A publisher is a proxy who will speak for you when your expression is such that its public dissemination would require extraordinary means. A press can make many more books than one can write by hand. But, of course, such means were expensive, and their owners had a legitimate claim to whatever profits they might make from the distribution of these expressions. However, one needs a publisher as a proxy only when one cannot speak to the public on one's own power. Computers have made public speech possible in new ways and in far

greater levels of complexity and applicability. We no longer need to protect publishers, for we have become them.

CHAPTER V

A LOCKEAN ANALYSIS OF THE CRISIS IN COPYRIGHT

As often as with Kant's work, or perhaps more so, it is suggested that the writings of John Locke – specifically the second of his *Two Treatises on Government* – may provide a justification for strong copyright laws.[177] A critical investigation of this Lockean text will show that it does not support the idea of a natural right which corresponds to copyright protection, and that, when we take digital media into account, it instead affirms the natural right to copy and to produce derivative works.

The famous and most oft-quoted passage, from *Chapter V: Of Property*, is as follows:

> Sect. 27. Though the earth, and all inferior creatures, be common to all men, yet every man has a property in his own person: this no body has any right to but himself. The labour of his body, and the work of his hands, we may say, are properly his. Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it, that excludes the common right of other men: for this labour being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is

[177] Cf. pg. 4 fn. 8 above, for a sampling of works offering such citations.

> enough, and as good, left in common for others.[178]

This idea of the "mixing" of one's labour with the common goods of the world, given – in Locke's view – to mankind by God is commonly referred to as the "labour-desert" theory of property. The expenditure of labour implies a right to the fruits of that labour, for, as Locke argues later, "if we will rightly estimate things as they come to our use, and cast up the several expenses about them, what in them is purely owing to nature, and what to labour, we shall find, that in most of them ninety-nine hundredths are wholly to be put on the account of labour."[179] If we follow Locke in holding that the value in the product springs from the labour mixed therein, and that the labour therein is by nature property of the labourer, the labourer then has a natural right to the value of the product with which he has mixed his labour.

This theory is a fine one when speaking of acorns and apples; when your labour provides you a good which has a use to you, whether that good emerges merely from collection of the bounty of nature or an industrial use of natural resources, you certainly have a moral claim over such a good. The idea that this theory can be applied to intellectual property, wherein what is collected and worked is not seed and soil but rather ideas, sounds, words, or facts of nature, is not an irrational one. It might additionally be argued that, the labour of the creation of such a good being of such a greater proportion than the labour involved in the subsequent utilization of it by parties other than the author, the author should retain a proportional right over such derivative works. This is

---

[178] Locke, John. *Two Treatises of Government.* Chapter V, §27. Project Gutenberg edition. Available at: <http://textual.net/access.gutenberg/John.Locke>

[179] ibid. Ch. V, §40.

certainly the viewpoint which has guided our extension of the Constitutional allowance of the ability of Congress to provide protection over "Writings and Discoveries" to the arguably extra-constitutional ability of Congress to legislate protection over works derivative of these writings and discoveries.[180] There is, indeed, support from Locke on this point, for he argued that

> [h]e that had as good left for his improvement, as was already taken up, needed not complain, ought not to meddle with what was already improved by another's labour: if he did, it is plain he desired the benefit of another's pains, which he had no right to, and not the ground which God had given him in common with others to labour on, and whereof there was as good left, as that already possessed, and more than he knew what to do with, or his industry could reach to.[181]

Thus, if I should have words, ideas, sounds or facts of nature available to me which are as good as those already taken up by others, I have no right to meddle with those already improved by others. The Beatles do not have dominion over the sounds of which their music is made, and should I wish to make music of my own I have as much access as they to those sounds, and therefore have no right to trespass upon the particular ways in which they have been already cultivated.

Thus, it seems that Locke provides a foundation for a very strong position on intellectual property rights. This is, however, no longer the case when we consider supposed rights over digital objects.

---

[180] On the extra-constitutionality of such extension, cf. Vaidhyanathan, Siva. *Copyrights and Copywrongs*

[181] ibid. Ch. V, §34.

We may first note a serious disanalogy that presents a problem for the application of Lockean property theory: digital objects, as we have noted in previous chapters, are non-rivalrous goods. When I take your acorns or apples, your cultivated land or, indeed, your book, my benefit is a rival of yours; I gain only through your loss. When I make a copy of your digital file, you are not the less for it. Thus, when I copy software you have written, for example, I do not trespass upon your right to the fruits of your labour – I have in no way prevented you from reaping the benefits of your cultivation of mathematical facts.

It may be objected that I have lessened the profits that you might have realized through the sale of such copies. This argument, however, is *ex post facto* and has no place here, for it already assumes that you have a right to control such copies, and this supposed right is precisely what is in question. Nevertheless, copies and derivative works are certainly a means of benefiting by the labour of another, and it may yet be that we owe to the author some share in the benefit we have therefrom taken.

If we should, for example, rework a Beatles song, we mix an amount of our own labour with the sounds, words, and ideas with which they have already mixed their labour. But these sounds, words and ideas are not found within virgin untouched nature. Do the Beatles then owe a portion of their benefit to, for example, the descendants of those who contributed to the invention of the modern guitar? To assert so would be ludicrous. The appropriation of the guitar has become akin to the appropriation of a fact of nature, for, just as Locke said regarding untamed nature, such appropriation being non-exclusive, it keeps nobody else from profiting from her own appropriation of the guitar. As Locke worded it:

> Sect. 33. Nor was this appropriation of any parcel of land, by improving it, any prejudice to any other man, since there was still enough, and as good left; and more than the yet unprovided could use. So that, in effect, there was never the less left for others because of his enclosure for himself: for he that leaves as much as another can make use of, does as good as take nothing at all. No body could think himself injured by the drinking of another man, though he took a good draught, who had a whole river of the same water left him to quench his thirst: and the case of land and water, where there is enough of both, is perfectly the same.[182]

The Beatles do not infringe upon the natural rights of the inventors of the guitars they used, for they have not taken anything from them, or deprived them of anything whatsoever. They, further, have taken nothing from the commons by taking the instrument for their own use, for they in so doing have kept nobody else from doing likewise. The same can be said of a later artist using the music of the Beatles. DJ Dangermouse, for example, has taken up the work of those before him, mixing the Beatles' *White Album* and Jay-Z's *Black Album* in his *Grey Album* (Fig. 4), but he has done so in a non-rivalrous, non-exclusive way, leaving, in effect, as much commonly available after as before his appropriation.

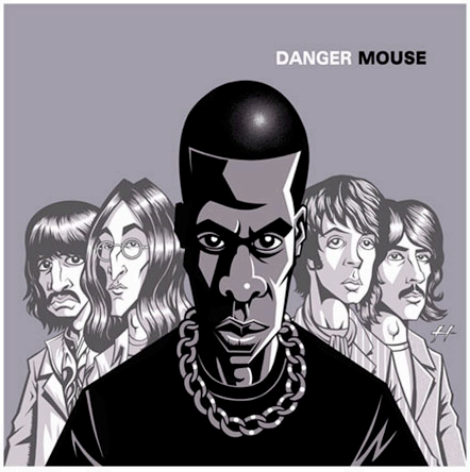


Fig. 4
From justinhampton.com

[182] ibid. Ch. V, §33.

It may be that we wrong the authors in some other way by such appropriation, but we do not tread upon their property rights in a Lockean perspective. For Locke, what is questionable is exclusion. This is necessary with regard to goods whose possession is rivalrous and exclusive, such as land, and it is this necessity that motivated Locke's attempt to justify holding property. As Locke stated:

> it is very clear, that God, as king *David* says, *Psal*. cxv. 16. *has given the earth to the children of men;* given it to mankind in common. But this being supposed, it seems to some a very great difficulty, how any one should ever come to have a *property* in any thing.[183]

If you have mixed your labour with elements of the earth held in common, you have, he concludes, a natural right to possess that cultivated good. If that good is, however, of a kind which does not *require* exclusion in order for you to reap profits from it, the superaddition of exclusion can find no justification in Locke, for Locke seeks only to justify the necessary evil of exclusion, not to justify exclusion when wholly unnecessary. Thus, you have a natural right to the song that you write: I ought not to deprive you of the lyrics you have written down. However, you have no right to tell me not to sing it.[184]

---

[183] ibid. Ch. V. §1.

[184] Indeed, even if the preceding argument about non-rivalry is ignored, it may nevertheless be possible to construct a Lockean argument along these lines. If it is granted that we can read a right of mental and cultural self-cultivation into the Lockean natural law, then it could be argued that the locking-up of culture which we see as the outcome of strong copyright protection violates the public's rights in this way, and the right to self-cultivation is presumably stronger than the weak and derivative property rights which may be held over copies and derivative works of intellectual goods. This argument, if more fully developed, would draw heavily on James Sterba's argument for welfare on a Lockean basis. Sterba argues that "Sometimes the rich, in preventing the poor from taking what they require to meet their basic needs, would not in fact be killing the poor but would only be causing them to be physically or mentally debilitated. Yet because such preventive acts involve resisting the life-preserving activities of the poor, when the poor do die as a consequence of such acts, it seems clear that the rich would be killing the poor, whether intentionally or unintentionally." (Sterba, James. *Justice for Here and Now*. Pg. 54) He argues that the right to life found in Locke is stronger than the right to property found in Locke, when that right to property extends over the non-essential holdings of the wealthy. Similarly, one could argue that the right to self-cultivation arguably

Tom Bell has put the point more generally:

> [C]opyright and patent protection contradicts Locke's justification of property. By invoking state power, a copyright or patent owner can impose prior restraint, fines, imprisonment, and confiscation on those engaged in peaceful expression and the quiet enjoyment of the tangible property. Because it thus gags our voices, ties our hands, and demolishes our presses, the law of copyrights and patents violates the very rights that Locke defended.[185]

If you should write a computer program, you have a right to object if I destroy your copy. In just the same way, if I should copy your program, I have taken nothing from you, and you have no right to keep me from free and full use of my copy of this program. We talk about property rights as a "bundle" which may or may not include certain particular rights, such as the right to exclude others from one's property, to use it, to profit from it, to rent it, or to sell it. Locke provides a strong defense of some rights in some ways, but his theory offers no support for the extension of the right of exclusion over copies of digital objects.

In closing, it is worth noting that, as common as appeals to Locke may be in ethical discussions of intellectual property rights, his basic theory has been directly repudiated as a sufficient legal claim for protection under U.S. copyright law. As Justice O'Connor wrote in *Feist Publications, Inc. v. Rural Telephone Service Co.* 499 U.S. 340 (1991):

---

implied in Locke is stronger than the right to ownership of copies and derivative works arguably implied by the right to intellectual property implied in Locke; for similar reasons.

[185] Bell, Tom W. "Indelicate Imbalancing in Copyright and Patent Law," in *Copy Fights: the Future of Intellectual Property in the Information Age*. Pg. 4.

> the 1976 revisions to the Copyright Act leave no doubt that originality, not "sweat of the brow," is the [p*360] touchstone of copyright protection in directories and other fact-based works. Nor is there any doubt that the same was true under the 1909 Act. The 1976 revisions were a direct response to the Copyright Office's concern that many lower courts had misconstrued this basic principle, and Congress emphasized repeatedly that the purpose of the revisions was to clarify, not change, existing law.[186]

The fact that you have laboured to alter elements of the world to make them useful implies a natural right for you to retain possession over that altered material, but it implies nothing about your right to control others' use of those same elements of the world, including directly copying your altered material. We do, indeed protect some such works, but this is contingent upon their originality, not merely because of their utility or merely because of the effort expended in their creation, and the reason for this protection has to do explicitly with the idea that such protection will serve the common good, and has little, if anything, to do with any supposed natural right.[187]

---

[186] O'Connor, Sandra Day. *Feist Publications, Inc. v. Rural Telephone Service Co*. 499 U.S. 340 (1991). Majority opinion, part II, §44, pgs. 359-360. Available at: <http://www.law.cornell.edu/copyright/cases/499_US_340.htm>

[187] Cf. Hughes, Charles Evans. *Fox Film Corp. v. Doyal*, 286 U.S. 123 (1932), majority opinion: "copyright is the creature of the federal statute passed in the exercise of the power vested in the Congress. As this Court has repeatedly said, the Congress did not sanction an existing right, but created a new one. Wheaton v. Peters, 8 Pet. 591, 661; American Tobacco Company v. Werckmeister, 207 U.S. 284, 291 , 28 S. Ct. 72, 12 Ann. Cas. 595; Globe Newspaper Company v. Walker, 210 U.S. 356, 362 , 28 S. Ct. 726; Caliga v. Inter-Ocean Newspaper Co., 215 U.S. 182, 188 , 30 S. Ct. 38." Available at: <http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=search&court=US&case=/us/286/123.html>

PART B

ONTOLOGICAL CONSIDERATION

The intention of this second section is to view from an ontological perspective the structure of the technological progression that has brought about the current crisis in copyright. Before getting underway, it must be made clear what is meant here by 'ontology.' This can be explained quite easily, for the conception of ontology that I mean to employ here is a very simple and modest one.

I do not intend to ask into what is "essential Being" in the realm of the digital, nor do I wish to address more general questions about realism and idealism. I do not wish to define "technology," nor its structure in connection with human experience, nor the manner in which technology might be a manner of "revealing" of the world. I intend to do nothing other than to outline the structure of being within a very small scope: the technological progression that underlies the current crisis in copyright. More specifically, I mean to outline a *regional ontology* in Husserl's sense.

By a Husserlian regional ontology, we may understand, with the help of the clear reformulations of Elisabeth Ströker, an "[attempt] to grasp the essential structure of a particular part of the world, and not just the acts which correspond to that part,"[188] where these parts of the world may yield such things as an ontology of nature, or of animality.[189] These ontologies are the eidetic structures of these parts of the world, where

[188] Ströker, Elisabeth. *The Husserlian Foundations of Science*. Pg. 9.

[189] Cf. Husserl, *Ideas*, §59.

> the essence, the *eidos*, of something is an object here in no other sense than the one in which Husserl had previously utilized and defended the concept of an object … for Husserl, to speak of an "object" makes sense only in relation to the acts in which the object is presented or constituted. Thus the proof of essences coincides with the exhibition of those acts that correspond to them.[190]

The regional ontology, overall, is then for us here the exhibition of acts related to this technological progression in such a way that the eidetic structure of this technological progression is made clear, and it is possible to lay bare the essential substance of this region – the way in which those things which are these things are.

It should, however, be noted that the regional ontology within this technological progression is somewhat more complex in its basis than some other regional ontologies, for here our purpose is not merely to ask how the essence of a set of objects is articulated in terms of human activity, but to ask how purposive human activity has brought about a change in the essence of that set of objects, and thus, reflexively, in the human activities which surround and involve that set of objects. There are serious questions about how to theoretically articulate such an "ontology in motion," and this is something that I intend to return to in the future. For the time being, this rather vague description will have to suffice.

To restate: the ontological investigation here concerns the essence of certain technological objects as they undergo a process of development, where the essence of these objects is articulated in terms of the human activities which are taken with regard to these objects. The first question here is what the structure of digital technologies – the

[190] Ströker, Elisabeth. *Husserl's Transcendental Phenomenology*. Pg. 71.

realm of possibilities for action which constitutes the essence of digital technology – is, such that the movement from analog to digital technologies in the production of intellectual products should bring about the changes we have already noted that have created the current crisis in copyright, which, again, must be understood as the dissonance between the essence of digital technology and the social structures currently in place which were established in relation to analog technologies.

An additional note before we begin: the reader may have noted in the introduction that the second chapter in this section – Chapter 7 – concerns national security. Rather than being coy about how it is that this came to be a topic of concern, I thought it might be valuable to say a word here about what this topic is doing in this section, and, indeed, in this work at all.

While completing the preceding chapters on ethics, I had always in mind a closing chapter that would outline some implications of the ethical analysis for philosophy of technology considered more broadly; considered, that is, ontologically in the modest sense above. In doing so, I continually debated with myself about whether an apparent parallel between my ethical analysis and a prior piece I had written on international terrorism was in fact an important parallel. In this process, I eventually came upon what seems to me their common element, this element being what the process of automation and its conclusion in what I will call the monadization of power.

So let me be clear about this: chapter 6 was written both (a) as an attempt to explain the ontology of technology implied by the changes described in chapter 1, and (b) as an attempt to connect those changes with what I view as a parallel crisis in national

security. The final chapter thus provides evidence that the ontological analysis of the crisis in copyright has yielded results regarding the nature of technological progress that are not limited merely to the consideration of copyright. Thus, as disparate as it may at first seem, the examples of martial technology – as well as a variety of other kinds of technology – in chapter 7 serve as an application of the theory developed in chapter 6. These examples are meant to serve as a demonstration that this theory is not of a universal with only one token, although I must admit that the work done here does not provide me with grounds to claim exactly how universal this analysis might be.

CHAPTER VI

AUTOMATION

Platforms and Outsourcing

In our initial investigation, we discussed the cheapening of means of production as instrumental in the emergence of the current and ongoing crisis in industrial use of intellectual property rights. In order to determine more exactly what has occurred here we shall now look more specifically into the nature of technological progress by means of which this cheapening has occurred. At this point, we will be able to outline whether and to what extent the processes that have led to the current copyright crisis may lead to significant and rapid change in other areas of technological application. In other words, we will be able to outline whether and to what extent the automation that led to crisis in intellectual property is a harbinger of further crises which may soon arise in other areas.

The radical cheapening of machinery built for the valorization of mathematical facts has two primary elements; first, an early and fundamental software innovation, and second, the hardware innovations whose most dramatic development came with the microprocessor. Both, however, are kinds of standardization, and their most radical possibilities are brought about by what we might call platform creation.

Turing's conceptualization of the universal machine for the valorization of mathematical facts (henceforth, "universal machine") represented a dramatic increase in efficiency, for a number of reasons. First, it allowed one machine to perform many

functions, but, second and equally important, it provided a base structure by which such functions could be put in connection with one another.

By reducing physical manipulation of mathematical values, whether these values are in terms of gear cogs or logic gates, one opens that manipulation to mathematical representation and understanding. The universal machine reinstantiates that basal mathematical understanding in terms of physical manipulation, thereby allowing the specific algorithm to be represented both mathematically and physically in the same way. Thus, the first-order algorithm – an instantiation of a simpler device, such as an adding machine – describable by the universal machine becomes the first software.

"Ware" comes from the Old English word "waru," meaning "goods," as in "silverware" or "glassware." The invention of the term "software" is credited to John W. Tukey (1915 – 2000), a statistician and engineer. Software in the universal machine is "soft" in a very specifiable way: it is the functional replacement of a machine, hence a kind of machine "ware," but has its existence only as a particular arrangement of parts within a different machine, being, hence, "soft" rather than "hard." The arrangement of the universal machine can be altered in order to instantiate any number of different soft wares. This requires, of course, that the universal machine have parts that are orders of magnitude more numerous than the parts of the software it is able to instantiate, and thus is quite inefficient when used for a limited number of similar applications, even when those parts are nothing more that electronic bivalent switches; bits. This is evidenced by the fact that even with contemporary computers we still use such more specialized digital technologies as hand-held or desktop calculators and PDAs, although this is lessening as computers become smaller and more limited digital devices assume additional

functionality, as, for example, the use of cellular phones as calculators, PDAs, and cameras. Nevertheless, the inefficiency of the universal machine is such that a real one has never been built. Contemporary computational devices are approximations of the universal machine, and these approximations will no doubt continue to approach universality.

The process of softening wares, i.e. of articulating functions in terms of arrangements of parts of the functional equivalents of universal machines, is a process of standardization and of platform creation. By the reduction of various physical processes to their algorithmic equivalences, processes are brought to a universal mathematical language – universal at least within the realm of the valorization of mathematical facts – and this standardization results in the possibility of interaction and commerce between wares of a sort that would be quite difficult had these wares not first been softened. This process also, of course, allows for much greater ease of manipulation of these wares, although this has more to do with platform creation, by which I mean the outsourcing[191] of the hardware to a centralized location.

To explain this in more detail, in the creation of soft wares, the actual physical elements of the algorithm contained within, e.g. an adding machine, are outsourced from the algorithm onto a larger platform which, with its greater number of usable physical elements, is able to recreate the physical instantiation of the softened wares. This

[191] I should make clear that I use this term quite literally, and without meaning to imply anything in particular about globalization and job outsourcing. Hardware is a good that includes its own usable physical form. Software is a good that has within it only the instructions necessary to bring about its proper physical articulation, which task must be accomplished by some structure external to itself. By "proper physical articulation" I mean the particular form in which the ware has its use-value; that is, in which is able to accomplish that goal which led to its creation. Thus, software must be executed or “run” on some hardware, and only exists in its intended form once this has been done. It is in exactly this sense in which software has "outsourced" its physical instantiation.

platform creation brings about changes that are not at all limited to the interoperability of wares by virtue of their standardized expression. This outsourcing of the physicality of the wares to the platform allows for an ease of alteration of softened wares, as well as a radical ease of transference, production, and reproduction of these wares. The universal machine as platform is able to reduce machines to mere communications, and, thus, their articulation requires no materials outside of the platform itself. It is as if each universal machine is a huge factory. At each launch of an application, gears go into action creating the needed device. At close of this application, the factory rends the device asunder, using those same parts to create another device.

What mathematics can soluabilize, the universal machine can create, without the expenditure of parts, using only the energy required to order and reorder its own parts. The Enlightenment project of mathematical description of the world interfaces neatly with this practical project. In recent years, as we have seen hardware innovations, such as the microprocessor, which have made this process feasible, we have seen continuous and continually accelerating softening of various applications. In word processing and email applications we have seen the outsourcing of paper, ink, and pen to the platform, where we have only their softened visual representatives, leaving us with only the task of placing the symbols available in order to transfer an expression from the mind to the platform, at which point this arrangement can be recreated upon additional platforms with no labour and little cost. This, in turn, has allowed for the eruption of spontaneous communistic communities among computer users. Indeed, the main obstacles to this process have been the "hardening" of platforms through closed-sourcing and copy-protecting programs and operating systems, which have worked against transfer of

softened wares and interoperability of wares, whether newly created, proprietary, or public.[192] Furthermore, these obstacles have nothing to do with the technologies in question, but rather only with governmental enforcement of laws intended to promote the amount and value of such creations.[193]

It is thus somewhat unsurprising that digital technologies should present such a radical challenge to the workings of capitalism. The creation of money as a general equivalent of goods is itself both a kind of standardization and a kind of platform creation, whereby the value of goods is outsourced into a marketplace wherein all things are reduced to exchange value articulated in a standardized monetary form. This innovation does not, however, truly dissolve the objects of commerce into the standard coin of the marketplace – it is only *as if* the objects disappear, although this process certainly nears complete success in some areas, such as futures markets.

Commodities take on an interoperability through the monetary general equivalent, e.g. 10 pounds of fruit is sold for a certain amount of money, which is more or less than the cost of a pair of pants, thus bringing these wares into a relation which they would not

[192] Strictly speaking, closed-sourcing and copy-protecting do not harden soft wares, but instead make soft wares emulate hardness. Closed and protected wares lose the increased utility that was gained in the softening process, and take on many of the disadvantages of physical objects. Interoperability becomes a problem, alteration and reproduction involve rebuilding instead of editing, and the wares lose their expression-like characteristics. This is, of course, the purpose of closed-sourcing and copy-protection; by reproducing the problems of the products of yesteryear, industrialists are able to continue to exploit them. Closed-sourcing and copy-protection are thus akin to planned obsolescence; they are unnecessary problems with the product that are introduced in order to remove functionality, resulting in increased and undeserved sales and profits. In Marxist terms, these means of deliberately sabotaging products of commerce constitute theft from society, for they waste labour-power on socially unnecessary overproduction.

[193] It may be argued that encryption of such data is a deterrent force independent of governmental intervention. This is, I believe, not the case. As I have already mentioned, any encryption mechanism can be defeated in a limited way by interception of the output of the program in question. This, however, is only a satisfactory solution when the information desired is the output of the encrypted data; when the desired data is that by which output is generated the source code itself must be reached, a task which is at any rate not overwhelming. If a program should be of particular interest, there is little doubt that the casual effort of a large number of independent programmers and crackers should be able to overcome even Herculean efforts on the part of a centralized producer's encryption.

otherwise have. This is in many ways similar to the interoperability which is afforded through the universal machine; it is perhaps most similar to our ability to take information from a website and paste it into a calculator or word processor. The encoded digital form of a real, usable natural language statement can be, by virtue of its common articulation, easily transferred to a different application on the same platform, where it can again assume a form presenting a human use, similar to the way the use value of the fruit can be replaced, via the monetary general equivalent, by the use value of the pants.

This similarity however is spurious, for the degree of dissolution in the case of digital technology could be paralleled only by, for example, obtaining linen pants and a cotton shirt, and using the two in order to make a linen shirt. The monetary general equivalent provides a standardized platform for exchange of goods, but digital technology provides a standardized platform for the goods themselves – it is as if disk space and memory were money that could itself be transformed into pants, fruit, or anything else. In this way, digital technologies realize far better than exchange value the declaration that "all that is solid melts into air." In another, quite important, way, they do far less in this direction, for they only melt away – soften – those wares that can be resolved to algorithms.

Nevertheless, these processes of standardization and platform creation are largely the same in both the monetary general equivalent and the universal machine. They only work upon different spheres; exchange value in the one case, mathematical valorization in the other. The fact that they have come into conflict may reflect nothing other than that the exchange value of particular valorizations of mathematical facts has zeroed out due to the radical cheapening of the means of production used in such valorization; a

significant enough occurrence, but not one which directly implies anything about the significance of the similarities between the effects upon goods wrought by the monetary general equivalent and by the universal machine. There may well be a significant further connection here, but this discussion shall leave it aside.

There is, however, a very significant parallel between this process of outsourcing and another Marxist concern: the alienation of labour.

Automation and Alienation

In industrial manufacture, automation appears as a transfer of human intentionality to manufacturing machinery. To take a characteristic industry as an example, a portion of the intentionality of the labour provided by the crafts(wo)man at the hand loom is outsourced to the loom itself in the development of the machine loom, just as the hand loom represents an outsourcing of a portion of the intentionality of the labour of the weaver. The intentional determination of the tightness of the weave of the fabric produced is transferred from the hands and needles of the weaver to the shuttle of the hand loom, and, in further technological innovation, the intentional interlacing of the crossing threads is transferred from the hands and shuttle of the hand-loom craftsman to the mechanized parts of the machine loom. There, indeed, seems to be a strong case for attributing significant aspects of the alienation of labour described by Marx to the late stages of this outsourcing of intentionality to platforms ever more disconnected from the human labour involved in the production process, for it seems quite intuitive that the embodiment of the intentional production of use value within machines should increase

efficiency only insofar as it transforms the character of labour from creative art and handicraft to mere repetitive labour.[194]

This process of automation can be viewed as a kind of outsourcing. In the preceding section, I defined "outsourcing" as the transference of functions from specialized devices onto a larger, shared platform, where the more flexible platform provides the physical instantiation of functionality that the more specific device outsources to it. This definition is meant to encapsulate the discussion of delegation of function that we see in Bruno Latour's Actor-Network theory. In his essay on an automatic door-closer, *Where are the Missing Masses? Sociology of a Door*, Latour discusses differing ways in which a social project – namely, making a hole in a wall when somebody wishes to pass through, and yet keeping the cold weather out – can be accomplished: either (1) we train the public to close the door after them, or (2) we hire a porter to close the door, or (3) we install an automatic door-closer. Here, we delegate the realization of this social project either to humans, in options one and two, or to non-humans, in the third option. Latour's point in marking the difference as one merely of "delegation" is, approximately, that "[t]he label "inhuman" applied to techniques simply overlooks translation mechanisms and the many choices there exist for figuring or de-figuring, personifying or abstracting, embodying or disembodying actors"[195]

---

[194] This is not to say that such outsourcing always results in a net alienation, for if all or almost all minimally purposive labour can be mechanized, as is the case with the movement of bits and the switching of logic gates in the case of digital technologies, there is an opportunity for human labour to involve itself in the production process only at a higher-level intentional determination of the design of the method and products of manufacture, as is indeed the case in digital technologies. More commentary on this realm of possibilities follows.

[195] Latour, Bruno. *Where are the Missing Masses? Sociology of a Door*. Available online at <http://www.ensmp.fr/~latour/articles/article/050.html>

In discussing outsourcing in terms of automation, I mean to agree with Latour's claim that it is in important ways arbitrary whether human intentionality is articulated in flesh and blood or in metal and gears. Either way, it makes sense for us to discuss it as intentionality. By "outsourcing", however, I mean something more than Latour's "delegation": I mean to speak of an increase in efficiency which comes about when that delegation moves from a more specific technical system to a broader platform. When we transfer the methods of writing – pen, ink, paper – to the technical platform of the computer/printer system, we gain efficiency in the production of written text. Similarly, when we transfer the intentional elements of making woven cloth to a technical system, it seems that we transfer human intentionality – as I will soon argue is the case in examples such as this – into the broader platform of the laws of nature themselves. There is, however, a serious question whether this is the correct interpretation of this process of automation, or whether we ought to instead view the delegation of human intentionality to machines as fundamentally a move from a more to a less general platform. This question, furthermore, may have serious implications for our understanding of the nature of automation. In the following, I will make clear when and for what reason it is appropriate to view automation as an outsourcing to a broader platform.

The physical basis of the determination of the attributes of the finished product is transferred from the worker to the loom. The physical constitution of the machine loom instantiates the intention of the producer (which is now no longer the worker, but a combination of those persons designing, producing, and possibly programming the machines determining the manufacturing process) – the tightness of the weave is no longer determined by the intentional actions of the worker, but is now brought about

through the mechanical valorization of laws of physics; the machine loom uses causal processes to accomplish many of the objectives which once required the intentional and skilled labour of the worker. This process is automation in a very strict sense; it makes automatic (literally, *auto-* [self] *matos* [willing]) what was once manual (literally, of the hand, from the Latin *manus*) by embodying intentional goals within the means of production.

This is a direct parallel: just as the universal machine empties out the substance of the particular objects of calculators and word processors by means of substitution of its parts for the parts of those less complex machines, so the machine loom empties out the labour of the worker by embodying the intention of that more complex platform – the human mind and body – into the concrete parts of the means of production. Although these are parallel movements, their directions seem to be opposite: the first moves from specific concrete tools to a general platform, while the second moves from the general platform to a specific concretion of intentional manufacture. Before making too much of this inverse relation, we should consider the role of automation and platforms within technological development more generally.

It could be said that the technological utilization of a common platform has been in effect since time immemorial, for, indeed, we can appropriately consider the human body to be a platform, although it is not a willful creation – deistic hypotheses aside – like the platform present in digital technologies. To take a direct example of the body's platform-nature, compare the surgical removal of a cancerous growth to the introduction of a drug that diminishes or eliminates blood flow to the growth, allowing it to atrophy.[196]

[196] One such drug is Exherin™, an experimental drug currently in testing, produced by the Canadian company Adherex. CEO and Vice Chairman Dr. William Peters explains "Vascular targeting agents take

In this case, introduced chemicals use the body's own systems in order to accomplish the intention formerly realized through the intentional and skilled use of the knife – the removal of the tumor from the conditions allowing its continued growth – thereby bringing the patient's body to take on the purposive action which the doctor would otherwise instantiate in her use of the scalpel. Alternatively, we can imagine using the body as a platform through the martial use of chemical or biological agents, in which case the agents brings the enemy's body to take on the purpose which the soldier would otherwise instantiate using a bayonet or bullet.

This kind of outsourcing certainly is not a structure of technological innovation that can only happen within a certain field, e.g. martial technology, a single time in a single way. For example, if we compare the destruction of a town by razing to destruction by brute force and handheld weaponry, we see here an outsourcing of the destructive force from the invading army and their weaponry to the chemical potential energy within the town itself in that case where the town is made of flammable materials. The efficacy of this technique is a very significant reason why wooden town walls and naval vessels were abandoned, when feasible, for structures that did not so easily allow such outsourcing.

For other examples of outsourcing as a form of technological progression, we may consider the difference between vaccinations and cupping as methods of removing pathogens from the bloodstream, or the use of lithium or thymoleptics as an alternative to

---

advantage of identified differences between cancerous and normal blood vessels. They target blood vessels within a tumor and cut off the blood supply that a cancer needs to survive. Adherex has pioneered an extensive tumor vascular targeting platform with the goal of increasing the efficacy of cancer treatment and minimizing treatment side effects. With [our] new patent, Adherex has the ability to block multiple endothelial cell adhesion mechanisms simultaneously or sequentially, alone or in combination with other adhesion antagonists, such as the anti-integrins. We . . . see major potential for the therapeutic benefits offered by this approach." (Adherex, *Adherex Issued New US Patent for Vascular Targeting Agents*)

lobotomization. The outsourcing of intended actions from an additional technological application to a platform already in place is often, if not always, a leap forward in efficiency and efficacy. What is odd is that, as we have seen in the example of the machine loom, movement in the opposite direction also at least occasionally represents a radical increase in efficiency. What is, however, common to both these kinds of increase in efficiency is an increase in automation. When the human platform is used as a causal, deterministic system, transference to this platform is an increase in efficiency; when the human platform is used as an intentional willing system, transference from this platform results in increased efficiency. The common technological innovation in these examples is that these technological advances are all ways of automation, for which we can now give a definition. Automation, in our technical definition, is the purposive reorganization of some portion of the world in such a way that it happens to bring about through cause and effect the result we wish brought about, and which would otherwise have come about only through purposive and skilled action. In more romantic and imprecise terms – but terms that speak more clearly to the psychological drive towards it – automation is shaping the world so that it behaves as if it shared our own desires.

What is remarkable about digital technologies is that they automate parts of our intentional actions which were themselves basically alien to our purposes, as opposed to industrial manufacturing machinery, which takes our purposes and makes them alien to us. To make the former case, let us compare the act of writing as it appears through the use of pen and paper and as it appears through the use of a word processing application. With pen and paper, our intentional actions must include such particulars as the shapes of letters, the spacing between words, sentences and paragraphs, the size of our script, and

so forth. The word processing application, in conjunction with a desktop printer, does all of this work for us. If our goal in writing is to express thoughts and to communicate at a distance, through time and/or space, all of these particular actions are alien to our goal, but they are required by our goal. Thus, the automation of printing, along with the automated simulation of the blank page and the written word on our screen, is not alienating, but instead liberating. This automation frees us from sensual particulars which once stood as impeding mediation between our thoughts and their printed expression.

I mean to allude here to the distinction made by John Dewey between his rather honorific definition of "means" as opposed to mere "coercive and external necessities."[197] As he discusses it, "[the laborer's] wage is hardly an end or consequence of his labor. He might . . . perform any one of a hundred other tasks as a condition of receiving payment."[198] By contrast, "Paints and skill in manipulative arrangement are means of a picture as end, because the picture is *their* assemblage and organization. Tones and susceptibility of the ear when properly interacting are the means of music, because they constitute, make, are, music."[199] To restate my point above in Deweyan language, I argue that expressive writing is made up of ideas and their forms of statement and communication, and that the bare facts of handwriting or typesetting were ever only external accidental preconditions to such writing, and were never their means.[200]

---

[197] Dewey, John. *Experience and Nature*. Pg. 367.

[198] Ibid. pg. 366.

[199] Ibid. pg. 367.

[200] Marx makes very much the same point in *The Economic and Philosophic Manuscripts of 1844*, stating that the wage labourer, alienated from his species-being, "is at home when he is not working and when he is working he is not at home. His labour is therefore not voluntary, but coerced; it is *forced labour*. It is

In industrial manufacture, the particular determinations of the worker are exported to the machine, just as in the case with the word processor and the most concrete actions of writing. The difference between these cases is, indeed, not immediately clear. If we consider the sewing machine, we find it to be very similar to the word processor. The particular determination of each stitch is basically inessential to the tailor or seamstress – it is alien to their eventual goal of the creation of clothing, but is required by this goal. The automation of this aspect of their production is therefore not alienating. The alienation of industrial manufacture comes about through the separation of the workers from the actions that were once the most central among the actions of manufacture – the determination of the form of the actual products made thereby. The garment worker is indeed alienated from the product of her labour, but this not done by means of the machine loom or the sewing machine itself.

The separation of labour and the standardization and mass production of goods result in alienation of labour. In fact, the alienation of labour is not caused by automation, but only by *incomplete* automation, as Herbert Marcuse argued in *One-Dimensional Man*.

Liberational Automation

The software author designs the instructions by which a program eventually constitutes itself out of the logic gates of the host computer. In HTML, for example, one writes out a set of instructions by which a distant machine represents to the distant viewer

---

therefore not the satisfaction of a need; it is merely a *means* to satisfy needs external to it." (Marx, Karl. *Economic and Philosophic Manuscripts of 1844*) I use Dewey rather than Marx, as Dewey gives us an understanding of "true means" in terms of consummation that is far more determinate and less abstract than the language of species-being which Marx here uses. The point, however, is essentially the same.

the product envisioned by the programmer. The programmer designs the machinery which mass produces iterations of itself upon request by users.

In a less automated form, this process would find its equivalent in the technician who draws plans for a machine, such as the Enigma, which is then produced by means of more specific manufacturing machines, the resulting products then being physically distributed to the users. This is, then, not so distant from the process by which clothing is designed, manufactured, and delivered. What, then, would be the more advanced version of this process of industrial clothing manufacture?

To find a true parallel of digital authorship within the realm of apparel, we would have to imagine that the sartorial author would design instructions for manufacture that could then be sent to some kind of machine that would automatically manufacture the object described. This is a vision of liberational automation; liberational in the sense that this kind of automation takes from us the need to concentrate on formerly necessary but basically inessential conditions for our projects, so that we are free to concern ourselves either primarily or entirely with the means which have a natural connection to our ends. The word processor automates the accidental and external processes of writing through its ability to cut, paste, print, and reprint, thereby freeing us to compose our work, liberated from these softened aspects of traditional writing. Web publishing, similarly, automates processes of distribution and transportation of soft copies of written work, freeing the author from these cumbersome processes which once stood in the way of communication with the public at large, and which once required newspaper presses and publishing firms. This liberational aspect of automation that arrives in the most complete

forms of automation can be expected to arrive eventually in other realms of technological development as well.

It may be argued that this vision is wholly unrealistic, for the materials of manufacture in the former case are nothing but logic gates and electrons, whereas the latter case requires a much more material input, and one which is not so readily amenable to such radical automation. This is, I believe, both shortsighted and occluded. This view is occluded for it forgets that available electricity must itself be created and fed to machines, and shortsighted for it assumes that a similar process can never be utilized in other areas of manufacture. Nevertheless, the objection is still a strong one, for the differences here are extreme and significant.

Consider first a device used in the manufacture of prototypes. Basically a modified inkjet printer, on one pass it lays down a thin layer of powder, and on the second pass it distributes a binder over the layer of sand just laid down. Through a multitude of such dual passes, it is able to create a layered block of powder and resin which is controlled in such a way that a digital three-dimensional model can be "printed" and the block of powder and resin can be constituted in accord with such a model such that the unglued powder falls away, leaving a three-dimensional object corresponding to the digital model. It is possible, in similar ways, to "print" objects in plastic (Fig. 5, over).[201] In these technologies we can see the possibility of a completely automated manufacture of goods.[202] It is not so unrealistic to imagine a similar process by which a

---

[201] Cf., e.g., "Rapid Prototyping at RPI: 3-D Printing," <http://www.rpi.edu/dept/aml/public_html/rp/rp.html>

[202] This possibility is not as far off as we may think. For example:

"A self-replicating 3D printer that spawns new, improved versions of itself is in development at the University of Bath in the UK.

three-dimensional digital model could determine the actions of a machine pouring some sort of substance that, upon heat treatment or chemical process, would form a breathable and comfortable fabric. This is, perhaps, science fiction, but it should at least serve to demonstrate that it is not the automation of labour which is itself alienating.

Fig. 5

Skull printed in 3D, from zcorp.com

For a very concrete example of how automation can be liberational, we can turn to the MIT "FabLab" in Ghana. The MIT Center for Bits and Atoms, an organization aiming at eventually producing Star-Trek-style replicators that would be able to assemble objects on an atomic level, has produced a number of fabrication laboratories – or "FabLabs" – and allowed members of the public to use these to create things. One of the major staple foods in Ghana, where one of these NSF-funded fablabs is located, is fufu, which is the end product of a labour-intensive, time-consuming, and somewhat hazardous pounding process of the cassava

---

"The "self replicating rapid prototyper" or RepRap could vastly reduce the cost of 3D printers, paving the way for a future where broken objects and spare parts are simply "re-printed" at home. New and unique objects could also be created.. . . Now Adrian Bowyer hopes to change [the high cost of rapid prototypers] by making the first 3D printer capable of fabricating copies of itself, as well as a wealth of everyday objects. He reasons that prices would plummet to around $500 if every machine was capable of building hundreds more at no cost beyond that of the raw materials.

"Better still, the machines could evolve to be more efficient and develop new capabilities, says Bowyer. Once he has the software to guide the self-replicating process, he plans to make it freely available online, allowing users to contribute improvements, just like the open-source Linux computer operating system, he says." (Biever, Celeste. *3D printer to churn out copies of itself.*)

root. The fablab offers Ghanaians the ability to cheaply produce a household appliance that would instantiate the external means of food manufacture that take so much time and energy.[203]

To turn to another example, we may imagine circumstances in which the automation of the vaccine could be alienating. The distribution of a new vaccine to a

---

[203] These fablabs are themselves a good indication that we can expect the cheapening of the means of production to have widespread impact in areas other than intellectual property. A fablab costs about $25,000, and is able to machine-tool objects up to 12' x 24'. The availability of these labs in impoverished areas would allow for the least well-off to take advantage of the digitally-driven manufacturing technologies which have been hitherto only available to the wealthy, and only used in service of making goods for those with significant disposable income. Fablabs represent the cheapening of physical factory production tools to the point that the subsistence farmer in a third-world nation might be able to design and manufacture the technologies they need in order to raise themselves out of destitution. This could substantially change international relations and usher in a new era of global politics. Neil Gershenfeld, director of the Center for Bits and Atoms, has made this argument as follows.

"We started using micromachining and microcontrollers to set up field "fab labs" (either fabulous, or fabrication, as you wish). They weren't meant to be economically self-sustaining; it was just a way of building up experience. We intentionally put them beyond the reach of normal technology in places like rural India and the far north of Norway. Once again we found a desperate response, but here personal fabrication does address what can truly be life-and-death problems.

"In one of these labs in rural India they're working on technology for agriculture. Their livelihood depends on diesel engines, but they don't have a way to set the timing. The instrument used in your corner garage to do that costs too much, there is no supply chain to bring it to rural India, and it wouldn't work in the field anyway. So, they're working on a little microcontroller sensor device that can watch the flywheel going by and figure out when fuel is coming in. Another project aimed a $50 Webcam at a diffraction grating to do chemical spectroscopy in order to figure out when milk's going bad, when it's been diluted, and how the farmers should be fairly paid. Another fab lab is in the northeast of India, where one of the few jobs that women can do is Chikan embroidery. The patterns are limited by the need to stamp them with wooden blocks that are hard to make and modify; they're now using the lab to make 3D scans of old blocks and 3D machine new ones. At the other end of the world, at the top tip of Norway, there's a fab lab that is being used to develop radio "bells" so that nomadic data can follow the Sami's nomadic herds of sheep and reindeer around the mountains.

"Each of these examples really are matters of survival for these people. Silicon Valley start-ups aren't trying to solve these problems, and even if they were the business models are unlikely to work on this scale. Through fab labs, locally-appropriate solutions can be developed and then produced locally. The design files can also be shared globally, for open-source hardware as well as software problem-solving.

"Working on this project has led to some very strange days in Washington DC for me, where I'll go from the World Bank to the National Academies to the Pentagon, and they all want to talk about the same thing. The possibility of personal fabrication is enormously important for each of these institutions' agendas, but it does not easily fit into their existing organizations.

"The World Bank is trying to close the digital divide by bringing IT to the masses. The message coming back for the fab labs is that rather than IT for the masses the real story is IT development for the masses. Rather than the digital divide, the real story is that there's a fabrication and an instrumentation divide. Computing for the rest of the world only secondarily means browsing the Web; it demands rich means of input and output to interface computing to their worlds." (Edge Foundation. *Personal Fabrication: A Talk with Neil Gershenfeld.* 23 Sept. 2003. <http://www.edge.org/3rd_culture/gershenfeld03/gershenfeld_index.html>)

population could easily become similar to factory work. The vaccine does the work within the platform of the body, the nurse having only to administer the vaccine. If we had systems of distribution not so intimately tied to human interaction as the hypodermic needle, as, for example, a hypodermic device which did not arouse fear or cause pain in the patient, and which took no skill to administer, vaccinating a large number of persons would become assembly-line work, and would certainly be as mind-numbing, even though rather more tolerable, for the social benefit achieved thereby would be far more certain, concrete, and easily kept in mind than that achieved in the majority of assembly-line labour.

In contrast to this example, we may imagine that a vaccine could be distributed in the same way as nerve agents are weaponized. A cloud-duster could be used to vaccinate huge areas, or the water supply could be supplemented with the vaccine. This more complete outsourcing/automation would remove again much of the alienation of labour that was created in incomplete automation.

Herbert Marcuse said as much in his *One Dimensional Man*. He spoke of the work which is "as life-long occupation, exhausting, stupefying, inhuman slavery," which "drudgery is expressive of *arrested*, *partial* automation, of the coexistence of automated, semi-automated, and non-automated sections within the same plant."[204] He also held that "[i]t seems that automation to the limits of technical possibility is incompatible with a society based on the private exploitation of human labor power in the process of production,"[205] a view which he traces back to Marx's statement that "[a]s soon as human

[204] Marcuse, Herbert. *One Dimensional Man*. pg. 25.

[205] ibid. pg. 35.

labor, in its immediate form, has ceased to be the great source of wealth, labor time will cease, and must of necessity cease to be the measure of wealth, and the exchange value must of necessity cease to be the measure of use value."[206]

Marcuse discussed the social effect of the increase of automation in terms of the increase in the ratio of white-collar to blue-collar jobs, and saw the revolutionary effect of continuing automation being slowed by labour opposition and absorbed by the welfare state. He wrote that "[a]t the present stage of advanced capitalism, organized labor rightly opposes automation [which comes to be] without compensating employment." This assumes – rightly for Marcuse, writing in 1964, but incorrectly for our contemporary and forward-looking considerations – that radical or near-complete automation would represent machines of industrial capital that would be inaccessible to the laborer. The automation which digital technologies represent for the production of informational products has just recently reached the radical and revolutionary stage at which the industry no longer requires large numbers of persons to complete its manufacturing process. With digital technologies, producers of informational products need only encode an informational good, e.g. a musical performance, and an indefinite series of digital copies can be made electronically and distributed electronically. The problem for this industry is that, at the same time, these radically automated tools of manufacture became publicly available. Thus, it is not merely the factory workers whose jobs are threatened, but the entire industry; executives, middle-managers, secretaries, and authors and artists. More to the point, the authors and artists, now having the means of

[206] Marcuse's translation. Marcuse's citation is "Karl Marx, *Grundrisse der Kritik der politischen Oekonomie* (Berlin, Dietz Verlag, 1953), pg. 592f." I have been unable to find this quote in my copy of the Grundrisse. A full copy of the Grundrisse, with pagination presumably differing from Marcuse's, is available at <http://www.marxists.org/archive/marx/works/1857/grundrisse/index.htm>

production available to them as members of the public, rather than only as industrial capitalists, are in increasing numbers willing to embrace this automation, finding compensating employment in use of those means of production now available.

Thus, it may be that the crisis in intellectual property rights is not merely cold comfort for Marxists, but a promise and harbinger of the possibility of a real breakdown in capitalism, in its current industrial form at least. As Marcuse wrote, "[c]omplete automation in the realm of necessity would open the dimension of free time as the one in which man's private *and* societal existence would constitute itself. This would be the historical transcendence toward a new civilization."[207]

Ivan Illich made similar observations about liberational possibilities that could be brought about through the reversal of the alienating nature of machine technologies. As he put it,

> For a hundred years we have tried to make machines work for men and to school men for life in their service. Now it turns out that machines do not "work" and that people cannot be schooled for a life at the service of machines. The hypothesis on which the experiment was built must now be discarded. The hypothesis was that machines can replace slaves. The evidence shows that, used for this purpose, machines enslave men. Neither a dictatorial proletariat nor a leisure mass can escape the dominion of constantly expanding industrial tools.
>
> The crisis can be solved only if we learn to invert the present deep structure of tools; if we give people tools that guarantee their right to work with high, independent efficiency, thus simultaneously eliminating the need for either slaves or masters and enhancing each person's range of freedom.

[207] Marcuse, Herbert. *One Dimensional Man*. pg. 37.

> People need new tools to work with rather than tools that "work" for them.[208]

Liberational, non-alienating automation – the automation that is characteristic of those tools which we can work *with* – frees the user of technology from aspects of action that are inessential to her goals, allowing her to concentrate upon those aspects of design and content that form her goals. This type of automation, as we have seen in the automation of the creation of intellectual goods in digital media, allows independent parties to become as if major industrial producers. We can expect the same to occur in other areas of technological development, as other technical spheres become similarly developed. One rather significant such area is martial technology; specifically, in the technological innovations of automation and outsourcing in means of destruction which have made large-scale global terrorism a viable political strategy.

[208] Illich, Ivan. *Tools for Conviviality*. Pg. 10.

CHAPTER VII

THE MONADIZATION OF POWER

But what then do these innovations of digital technologies – radical automation and the cheapening of means of production made possible thereby – which have led to the current and ongoing crisis in industrial use of intellectual property have to do with the current and ongoing crisis in terrorism? In perhaps unobvious ways, both crises have indeed been brought about by the same elements.

Biological and chemical agents have been used in warfare since antiquity. Consider for example the Scythian use of darts coated with a putrefied mixture of snake venom, human blood and animal dung, or the use of toxic gasses by the ancient Chinese and Indians.[209] When we compare biological with conventional weapons we may note a number of interesting distinctions. To start with rather elementary means of destruction, let us consider first a cudgel or blade. These means of destruction bring about a traumatic alteration of the body of a combatant, thereby lessening or eliminating their ability to bring destructive force to bear. With the cudgel, the outer surface of the body is compressed with significant force against the body itself, this compression being accomplished through the inertial resistance of the body. By this means, the function of the body is potentially lessened or eliminated by disordering of various systems, whether of the muscles or of the organs. The blade brings about a similar disruption, excepting that, should it be sufficiently sharpened, it is able to more directly effect bodily

[209] Cf. Mayor, Adrienne. *Greek Fire, Poison Arrows, & Scorpion Bombs: Biological and Chemical Warfare in the Ancient World.*

dysfunction through disconnection of muscular tissues, circulatory pathways, and so forth. A minor alteration can be found in the structure and function of slings, spears, arrows, and even such rather more advance means as the ballista or catapult. In this case, the specific cause of the disruption of functionality is directly applied to the bodies of combatants, although with a more or less complex delivery system. This, then, is the form of the most basic kind of conventional weaponry; the disruption of bodily processes required for the application of means of destruction accomplished by direct corporeal contact with the weapon in question.

Incendiary devices are sometimes similar in their workings, but sometimes a step removed. The direct application of fire to combatants is effective in quite the same way as the weaponry already discussed. Razing, alternately, works upon the means of production of the resources available to produce the ability to bring means of destruction to bear; while combatants still have the ability to bring force to bear, the destruction of their means of subsistence lessens or eliminates their ability to bring force to bear in the future either by degree or by disruption of necessary bodily function. The combatants may become tired and malnourished, or a lack of shelter may invite opportunistic illness. Similar structures are in play with the poisoning of wells or the salting of the earth.

Somewhat different again are bombs and petards. Until modern times, these have been effective primarily in the way that slings bring their effect – through the propulsion of objects, in this case shrapnel, which can cause blunt trauma. In modern times, bombs and grenades have been able to more directly apply fire to combatants and the structures that allow their subsistence, and the increased force of such devices has allowed for the infliction of blunt trauma by sudden air movement as well as by shrapnel.

These being, roughly speaking, the methods of function of conventional weaponry, let us now consider biological and chemical weaponry. Biological and chemical weapons also disrupt bodily processes required for the application of means of destruction, but do so with an additional step. Biological weaponry introduces pathogens into the various corporeal systems of combatants, resulting eventually in a lessening or disruption of functionality of those systems required to bring destructive force to bear. There is, however, here a difference in the specificity of effect.

The application of the agent does not itself bring damage, but the agent, once introduced, interacts with corporeal systems, bringing about a harmful effect upon those systems. The force of the weapon is, in this case, outsourced from the weapon itself to the platform that produces the force of the enemy combatant.

In the case of massive physical weaponry – clubs, bows, shrapnel – mechanical energy is absorbed as distortion, whether of a human body or of a town wall. In the case of razing or burning oil, thermal energy is transferred to the target, possibly bringing about a chemical alteration in composition, whether that is searing flesh or ignition of wood. In biological and chemical weaponry, the introduction of pathogens has itself no significant effect. The pathogens have themselves only a minor chemical potential energy that sets into motion a series of processes, which, in the environment of the human body, brings about an eventual disruption in bodily processes. The forces that cause harm, in the case of biological weapons, are internal to the body suffering their effects. In this way, biological weaponry represents an outsourcing to a common and standardized platform, and an automation of the process of destruction of the body of the enemy.

A rather different kind of outsourcing can be found in the unleashing of the powers within the atom. In this innovation, the process of the release of energy held within chemical bonds through combustion is brought to a more physically fundamental level, wherein the energy contained within the atomic constitution of a relatively unstable nucleus is released in its reformation into more stable atomic configurations. Here the intentionality outsourced is quite basic: to produce an exothermic reaction. At an early stage of technological development, exothermic reactions were engendered by thermal transfer by items already exhibiting such an exothermic reaction, as in, for example, the application of torches to straw roofs. At what is perhaps the next generation of automation, chemical compounds known to produce such a reaction were applied to various items, thereby producing a desired effect, as was the case in purposive transformation of enemy boats into burning enemy boats via the application of Greek Fire, or in the transformation of combustible materials into mechanically effective gasses in coal power generators or internal combustion engines, or even in Heron's aeolipile. The unleashing of atomic power merely brings the intentional release of thermal energy to a more basic platform, assuming we discount the additional and slower destructive effects of radiation resulting from such atomic processes, being an undesirable side effect of atomic power, and a debatably desirable side-effect of military atomic force.[210]

Nuclear devices and properly weaponized chemical and biological agents are all forms of automation, wherein the human intention of the application of destructive force is outsourced into causal systems; into the realm of necessity, to paraphrase Marcuse.

[210] Radiation poisoning is, of course, a kind of automation of military force in much the same way as are biological and chemical weapons, modifying the enemy such that her body's own mechanisms are turned against themselves.

These, furthermore, are relatively complete forms of automation – and they are in exactly and only a technical sense in this way examples of liberational automation, as previously discussed – for they go beyond the industrial production of death which we found in the Second World War, where soldiers were still required to do the dangerous, dirty, repetitive, and presumably alienating work of bombing runs and gassing small batches of people. With these innovations in automation, the equivalent of the firestorm of Hamburg or the genocide of the Shoah can be carried out by independent members of the general public. In the same way as it has become possible that independent persons can produce the same intellectual products which once required presses, machine operators, and managers, it has now become possible, through radical automation, that independent persons can now produce the same destructive effects which once required soldiers, generals, and a massive tax base.

In this chapter, we will further investigate the practical effects brought about by the increasing public availability of increasingly powerful means of destruction. In this investigation I hope to establish (1) that the current crisis in national security comes from a technological progression that is of a kind with the technological progression that brought about the current crisis in copyright, (2) that the relevant aspect of both these technological progressions in an increase in automation past a certain threshold, at which point it may properly be called radical automation in the sense we have already discussed, (3) that the effect brought about by radical automation can be in both cases described as a monadization of power, a term which we will soon define, (4) that the seemingly inevitable failure of capitalistic employment of intellectual products in the crisis in copyright has a parallel in the crisis in national security which implies the

inevitable weakening and possible failure of the nation-state as an independent political body, this parallel having weaker implications in the latter case due to the lessened legitimate access to means of destruction compared to means of production, (5) that the reaction of the status quo over against this threat of enfeebling and/or failure is also parallel: where, in the former case we see the three ways of being-against technology described in Chapter 2, (a) advanced accumulation, (b) systematic colonization, and (c) the attempt to establish informational feudalism, in the latter case we see the parallel actions of (a') preemptive war, (b') anti-proliferation efforts, and (c') the attempt to establish a Pax Americana, and, finally, (6) that our proper response in each case is also parallel: we must embrace the future and attempt to realize its best possibilities before the situation becomes more dire, as it will in the absence of proactive initiative in moving our methods to become in accord with the new implications of new technologies.

Before beginning, a note should be made about a recent book: Benjamin Barber's *Fear's Empire*. This book, published in the latter half of 2003, shares many concerns, themes, and conclusions with my own work in this chapter, and my characterization of the misguided goal of the preeminent nation-states, which parallels informational feudalism, as a Pax Americana is indeed very much indebted to this text, and takes its name straightforwardly from it. I will make a few notes over the course of this argument, addressing significant similarities and divergences where they arise.[211]

[211] In case the reader is curious about these connections, I will offer this summary of ways in which my argument is related to Barber's.

The general agreement between Barber's analysis of the current problem and mine is tied to our uses of Hobbes' state of nature as a model for the (speaking loosely) post-9/11 international political situation. Our different perspective on this issue is illustrative: Barber holds that it is by means of fear that "even the weakest can kill the strongest," (Barber, Benjamin. *Fear's Empire*. Pg. 72) while I hold that the

Absolute Force

Soon after the events of September 11th, it was often said that our world has changed, that our way of life will never be quite the same again. We have been reminded, in rather a new way, of a kind of radical vulnerability which we have lived with since the 1950s: we live with the knowledge that we may be killed simply because of the country we live in; not because of what we believe, or because of anything we've done, but *only* because of an affiliation which most of us were born into and which we might not have otherwise chosen.

We are affiliated with actions which we may not endorse or even be aware of; actions taken by our government, which is to say, taken by people we do not know, may

---

idea that even the weakest can kill the strongest is increasingly becoming true in an entirely literal sense, due to the ever-increasing general availability of the means of destruction. These are certainly very closely connected, and I do not disagree at all with the case which Barber lays out, I only mean to discuss a different topic which has the same consequence. The only way in which I feel Barber's argument falls short is in that it does not include an analysis of the ongoing development of technology, and, thus, when Barber states that "Fear is terrorism's only weapon," (ibid. pg. 24) I would respond by saying "Yes, but not for long." As to whether these are two faces of the same phenomenon – whether the emphasis on fear within the current political environment is emergent from the same phenomenon as that which brings about the radical cheapening of the means of destruction – well, that question seems to call for a book yet to be written.

As to the similarity of our prescription for the current problem, my argument for atopocracy is somewhat more directly implied by my analysis than Barber's for "citizens without frontiers," (e.g. ibid. pg. 212) but this in no way means that my argument is stronger or more compelling – I think rather the opposite is the case. Barber's work concerns political doctrines and complex historical situations, while mine is abstract and has the illusory and suspicious simplicity of a theoretically-driven position. I view the fact that we came to a similar conclusion as a validation of my own inquiry far more than I view my work as outlining a theoretical foundation for his – his work needs no support from the likes of me. The fact that his complex and nuanced historical-political analysis should present a similar conclusion as my abstract analysis of the ontology of technology seems to me evidence either that my analysis has been successful, or that the conclusion to which we both came was in some way obvious. I believe the former, and, I must admit, this is not merely because I wish to avoid belittling the work of Dr. Barber. I hope but dare not assume the reader will agree.

Finally, I must again praise Barber's work in this area over my own in that his argument for the conclusions we share is based in hope, while mine is based, largely at least, in fear. I worry that I may in this way be contributing to the power of the empire of fear, but I think the fears that I discuss here are rational ones, and I feel I have used these fears against the empire of fear, which, after all, I argue cannot survive technology's progress. Our fear can motivate us to act in order to free ourselves from fear, or we can be delivered over into fear's empire. I most emphatically favor the former option.

not agree with, and likely do not trust. When there are others in the world who are sufficiently angry, sufficiently unethical, and sufficiently well-armed, opposition to actions we may not endorse taken by people we do not know tends to be articulated in the form of our deaths. Our potential death, our possible involuntary political martyrdom, may find us at any moment. There may be an attack at any place and any time. The attack may be sudden, fatal, and unavoidable.

We have entered a new era in our political lives, but it is not because of our vulnerability. New avenues for change and reform are beginning to open to us, but we have concentrated on the increasing problems facing some of our old ways. Our vulnerability to terrorist attacks shows us the era which is ending, an era which we are now able to see in a way clearer and more complete than ever before, but the strength and versatility of terrorist organizations themselves demonstrate new possibilities becoming available to us.

The emergence of these new possibilities, and the gradual closing of certain old ones, is a change brought about by the changing nature of martial technology. This change, particularly, the increase of automation to a radical degree of completion, has heretofore not been entirely appreciated. This change is neither sudden nor new, but is of ever increasing importance and clarity, and yet until very recently we have failed to recognize that is has occurred, much less to understand its implications. The deterrent structure of mutually assured destruction covered over the new possibilities which weapons of mass destruction brought about, and we notice these possibilities only now, when they can be used outside of the reach of the deterrent structure. As Paul Virilio makes the point;

> *As the continuation of total war by other means*, nuclear deterrence marked the end of the distinction between wartime and peacetime, and cleared the way for a *worldwide state of undeclared war* between the Western and Soviet blocs – of which, quite logically, terrorism and gangsterism would be the main beneficiaries.[212]

Even today, we tend to think that technical force is able to oppose technical force. This is inaccurate: it is instead the case that technical force is able to diminish or disable the means of the production of technical force. This abstract distinction may seem minor and without serious consequence, but it is exactly this mistake that prevents us from recognizing the seemingly inevitable defensive ineffectuality from which the contemporary nation-state must suffer increasingly as technology progresses. Certain elements of the Cold War have allowed this fallacious viewpoint to continue to seem reasonable, as it once in fact had been. The increasing viability and efficacy of terrorist attacks will, however, force us finally to recognize its inaccuracy.

In order to explain why we make this mistake and why its consequences are in fact consequential, we will begin with a consideration of melee warfare, such as we might have seen in the Middle Ages. Each combatant wields a certain amount of technical force; each is able to use available tools and techniques to bring a certain degree of destructive force to bear on their opponents. The degree of the force brought to bear in an offensive action, such as the thrust of a blade, may be severe or even fatal to a single opponent, but no single offensive action is decisive to the battle as a whole. The battle as a whole is decided by a great collection of these offensive actions.

---

[212] Virilio, Paul. *Ground Zero*. Pg. 52. Emphasis in original.

Each successful action brings a destructive force to an opposing combatant, thereby lessening or destroying the technical force that the opposing combatant is able to bring to bear thereafter. In this way, an advantage, either in number or in technical force per combatant, held by one side tends to become greater as the battle continues, for the advantaged side is able to, on average, bring about a greater amount of destruction to the technical force of the disadvantaged side, thereby making the disparity ever greater. Thus, in general, it seems we could determine the likely victor of a battle by comparing the sums of the technical abilities of the combatants of each side.

This is the view which we tend to mistakenly maintain – that force on one side "cancels out" force on the opposing side, and that the side holding the advantage in total force is proportionately more likely to win the battle, whatever "win" might mean in the case in question. This view has worked very well until quite recently. A greater number of people acting together do indeed form a collective that is able to bring a greater force to bear than would be possible with a lesser number of people. Additionally, persons with greater technical abilities, better tools and techniques, are indeed able to wield a collective force as destructive as a greater number of persons with lesser technical abilities. These facts, however, *do not* imply that the greater overall force will win, even when we ignore ambushes (which, after all, could be considered to be a kind of technical advantage born of stealth, camouflage, and/or misdirection) and other unusual circumstances.

There is a certain point in technical progress when the destructive force brought to bear by a single offensive action becomes great enough to be decisive to the battle. The overall advantage held by one side may be made irrelevant if the disadvantaged side

should be able to make a first strike of crippling force. When technical abilities reach this point, we no longer even have battles to speak of, for the single offensive action precludes the possibility of effective retaliation – the opposed forces no longer encounter one another, they do not *engage* one another. This engagement, this comparison of total forces, this "canceling out," was never anything but an emergent principle of a great collection of individual simple actions. When these actions become sufficiently significant independently the emergent principle fails to crystallize and instead of battles we have only individual offensive actions. This is how it comes to be that while having 1,000 foot soldiers indicates a strong likelihood of victory over a group of 500 foot soldiers, it is not the case that being able to destroy the world 50 times over indicates any particular advantage over an opponent which is able to destroy the world only five times over.

Nevertheless, the Cold War did not yet show the falsehood of our assumption of the opposability of technical forces, for the particular circumstances present at that time allowed an effective strategy of deterrence, which still produced the false image of the engagement of technical forces. We knew who had the ability to bring this kind of decisive force to bear; we knew where to watch, and how to tell when such a force had been dispatched. Now we don't even know what the weapon will be, or who the enemy is. Consider again the principle mentioned above: a greater technical ability is able to compensate for a lesser number of combatants when considering the destructive force which each may bring to bear. The radical automation present in weapons of mass destruction makes available what I will call an *absolute force*, which I define as an individual offensive action which renders the opponent unable to launch a significant

retaliation. As technical progress continues, this absolute force will be available to groups of increasingly fewer numbers of people. For example, not long ago we required tanks, soldiers, bombers, and, of course, the infrastructure which produced them – a huge amount of technology and a large group of combatants – in order to bring an absolute force to bear in a battle. I refer to *Blitzkrieg*. Now, we have technologies, such as weaponized nerve gas and unmanned aerial vehicles, which enable a mere handful of extremists to bring to bear a force at least as powerful.

As technical ability increases there is an ever greater number of methods of wielding absolute force and these methods require ever fewer persons working in consort. A deterrent strategy is dependent upon a threat of mutual destruction. As groups able to provide such a threat become smaller it becomes more likely that a group will assemble which will consider its own destruction to be an acceptable loss, and, perhaps more importantly, mutual destruction becomes itself increasingly impossible to guarantee.

As technology progresses it becomes possible to bring an absolute force to bear without the need for congregation in a specifiable location. A nation is no longer needed to launch a bomb, nor even a camp or headquarters. Furthermore, as there are ever more groups able to bring such a force to bear, and ever more methods of doing so, it becomes ever more difficult for us to adequately monitor these groups such that we would be able to bring a retaliatory force to bear, even if they should be locatable enough not to otherwise prevent this. When there was only one method, the ballistic missile, and basically only one likely source of such an attack, it was possible to ascertain that an absolute force had been launched with sufficient time remaining to retaliate before the force brought its absolute effect to bear, thereby allowing us to retain the illusion that an

engagement of forces would occur. With these limits no longer in place, it is now possible for us to see clearly that technical force does not operate in opposition to technical force. They are not opposed, for they do not engage one another, but instead each acts on the *means* by which such forces are produced.

Again, this seems to be a minor difference, but it is anything but minor when the forces in question come to be absolute. In the case of an absolute force, the attacked party is unable to guarantee that *any* significant harm should be brought to their attackers unless it be done in that ever shorter window of time between the deployment of an absolute force and the realization of its effect. When we realize that technical force acts only upon the means of production of technical force, and when we consider the increasing possibilities of absolute forces, it becomes clear that deterrence will only become increasingly ineffectual.

What if Thomas Hobbes had noted this conceptual mistake and its implications when considered, as above, in conjunction with ongoing technical progression? This is certainly a live question if we believe the case which I have made thus far, for, in Benjamin Barber's words, "more than anything else, today's global anarchy, in which terrorism and crime prosper and market capitalism escapes the bonds of democratic oversight, resembles [the] state of nature hypothesized in earlier social contract thinking."

Hobbes theorized in *Leviathan* that the function of and the justification for the nation-state was the protection of its citizenry. If we imagine a state of nature, where no man has banded with another, where "every man is enemy to every man," we see that

> [i]n such condition there is no place for industry, because the fruit thereof is uncertain: and consequently no culture of the earth; no navigation, nor use of the

> commodities that may be imported by sea; no commodious building; no instruments of moving and removing such things as require much force; no knowledge of the face of the earth; no account of time; no arts; no letters; no society; and which is worst of all, continual fear, and danger of violent death; and the life of man, solitary, poor, nasty, brutish, and short.[213]

By banding together in a social contract – wherein each agrees not to attack his or her compatriots and to defend them, each and all, from those outside the social contract – fear and danger are lessened, and all these great achievements of civilization are made possible though the security and safety found in numbers.

This, of course, is predicated upon the advantage of collective action. Given the current situation, it seems that Hobbes would forecast an inevitable decline in the value of the nation-state, for the nation-state is inevitably increasingly unable to protect its citizens either preemptively, in direct resistance, or through the threat of retaliation, and the force wielded by ever smaller groups is no less absolute than that wielded by the largest. This means that, in Hobbes' reasoning, there is no longer any advantage gained in banding together past that point at which a group is able to wield an absolute force, but, in fact, a *dis*advantage presented by numbers greater than sufficient for this degree of force. Collective action is in this way no longer an effective strategy.

The Tyranny of Each Against All

Terrorism is a strategy opposed to collective action. It is a strategy that is now able to be effective in a new way, as it becomes possible for a small group is able to act

[213] Hobbes, Thomas. *Leviathan*. Chapter 13. Available at: <http://etext.library.adelaide.edu.au/h/h68l/chapter13.html>

with the force that was once available only to significantly larger groups. For this reason, terrorism has only recently become a strategy able to directly and suddenly present a real threat to the continuing viability of a nation.[214]

It is possible for a society to ignore the bombings in Israel or the anthrax mailings in the United States – possible but difficult and painful – but no society could ignore an ongoing series of attacks like those of September 11th. Were a group able to launch a series of such attacks and remain unlocated, we, as a nation, would be taken hostage. This situation is still, thankfully, quite remote, but it will remain so only if we do not ignore this possibility and its implications.

---

[214] It may well be argued that this ignores the power which fear may wield over us, as it could also be argued that my use of Hobbes emphasizes physical security too heavily and does not take sufficient account of the importance of order and the rule of law. Benjamin Barber argues both of these cases, and it is incumbent upon me to respond seriously to these differences in our accounts on these points.

First there is Barber's claim that "It is the dark secrets of Hobbes's state of nature that the terrorists have discovered: in a world of fear and insecurity even the weakest can kill the strongest; fear of death can be more crippling than death itself. . . " (Barber, Benjamin. *Fear's Empire*. Pg. 72) I freely concede this point, but hold that this is true only temporarily, excepting in cases wherein terrorists are able to wield absolute force, at which point the weakest can actually kill the strongest regardless of whether the strongest is already crippled by fear and insecurity. As proof of this claim of mine, we may compare the climate of fear in the United States versus that in Israel. It is currently the case that absolute force is not easily and generally available, but we see a marked difference between the manner in which the fear of terrorism is reflected in these societies. I hold that, in time, we in this country will reach an acceptance of the threat of terrorism that we see already in the Israelis, who after all have been dealing with terrorism more consistently and for a longer period of time. The terrorists' use of terror can bring a strong nation to a state of weakness only for a certain time, and I mean to here discuss not this temporary though critically important crippling effect, but rather the more permanent change which is brought about not through the method of fear, but rather through the organizational structure of these organizations in combination with the radical automation of the means of destruction.

Second, Barber claims that the social contract represents for Hobbes a solution to the state of nature not because it brings "power, which men have in the state of nature, but [because it brings] law and contract, which they lack." (pg. 70) I will not argue that this is a poor reading of Hobbes, and freely admit that it may in fact be a preferable reading than the one that I have used in the above. Regardless, it is not the reading of Hobbes most to the point for the present inquiry, for certainly a renewed threat of death – especially one which can threaten a significant portion of a population – impinges upon our freedom to make laws and contracts, for laws and contracts may bring massive destructive consequences, as I will argue in the following. Furthermore, my concern is not the loss of a mere feeling of security, as Barber discusses in the first quote addressed in this footnote, but rather the actual loss of security on a large scale, and thus this more dire and perhaps more crude reading of Hobbes is appropriate for my purposes here.

Hobbes imagined that without civil society humans would live in a perpetual war of all against all. Collective action allowed for peace, or, more precisely, for a suspension of hostilities. This suspension is indeed no longer war, but is instead a prevention of war *merely* by superior force, a strategy whose most obvious and general name is *tyranny*. From the perspective of a member of civil society this could be called the tyranny of all against each, or the tyranny of the greater number over the lesser.[215] The tyrannical form inherent within collective action is however something that can be worked against, and I am not alone in asserting that this project has, indeed, been the primary aim and project of modern politics.[216]

We might view late-modern European politics as primarily a movement in opposition to monarchy. It has regardless become clear that the will of the majority may be just as oppressive as that of an uncaring monarch, and a fundamental concern of modern political theory has been to find a way in which a centralized government can perform the functions which make a collective power necessary – e.g. to defend its citizens from harm both domestic and international – without destroying the civil liberties of its citizens. This has been a struggle for structural reasons; we attempt to have the majority wield the stronger force, but without allowing the victor of a dispute to be decided *only* by the stronger force, and to bring this about the majority must maintain a

[215] *The tyranny of all against each*, as I am discussing it here, is related to but not identical to Alexis de Tocqueville's concept of *the tyranny of the majority*. Tocqueville's concept is much more specific and nuanced; referring to local majorities working against an abstract idea of the will of the majority of humanity. I mean rather to refer to the fact that the will of the many can often control the fate of the fewer, and that the strong may have an ability to make decisions for the weak. In other words, Tocqueville is lamenting the ability of a local majority to oppress a local minority, whereas I am lamenting the oppression inherent within the structure of collective action. Mill's use of the term in *On Liberty* seems to me closer to my own.

[216] Cf. e.g. Mill, John Stuart. *On Liberty*. Ch. 1.

prima facie opposition in every case to each particular majority. This prejudice against the stronger is a foundation of the modern republic, and is expressed clearly in checks and balances, freedom of speech, search warrants, restrictions upon admissibility of evidence in court, and so forth – as Madison summed up this fight against the evils of faction, "a Republican remedy for the diseases most incident to Republican Government."[217]

All of this is predicated upon the efficacy of collective action – for if the majority cannot tyrannize the minority, there is no need to provide these checks to the power of the majority, for the majority has no power over the minority *per se*. I worry that, in a kind of hysterical denial of the increasing inefficacy of collective action, we may again see collective action in its most base form: mob rule, fascism. Regardless, this very possibility is becoming increasingly closed to us. What we see ahead, given, as discussed above, sufficiently widespread access to the means of destruction, is not the tyranny of all against each, but rather *the tyranny of each against all*.

How is it that we are to come to have political goals, and to act effectively upon them, when any *one* of us might decide to kill the rest; when any faction, any collective group having goals and ideals, is always under threat of sudden death, should they displease anybody disposed to dispose of them? This possible world which we can now see ahead of us is a world held hostage, where only the most despicable, uncaring, or suicidal can make political decisions freely. No longer the rule of the most numerous in the tyranny of all against each, but the rule of the most *violent* in the tyranny of each against all.

---

[217] Madison, James. "Federalist Paper No. 10," *The Federalist Papers*. Pg. 48.

This possible world where terrorism is an effective strategy seems to be an inevitable future as long as technical progression continues. We have at this point two obvious options: we can either attempt to stop technical progress – which would require the destruction of civil liberties and a reversion to the worst totalitarian possibilities of collective action – or we may engage in widespread preemptive actions against potential threats. This first option is in my view obviously unfeasible and undesirable, and if the opinion of the reader should differ, I apologize for not giving an argument against this view. The second is much more reasonable, although I think ultimately still unfeasible, and has recently been defended as a proper response to the current situation by, among others, Henry Kissinger.

As Kissinger explained in a recent interview,

> Now, when you're dealing with terrorists you're dealing with people that cannot be reached by deterrence, because they have nothing to defend. They cannot be reached by negotiations, because they are not seeking a compromise. And therefore you cannot let them strike and then respond. The same is true with respect to weapons of mass destruction. Where we have to be careful with the concept of preemption is not to create the impression that any nation can define its own concept of preemption and can attack anybody it wants. So I strongly supported preemption on Iraq. I strongly supported what the president has done, but I would now also urge that in the next phase of foreign policy we talk at least to the other democracies to see whether we can get some principles of preemption that prevents preemption from becoming always a solitary effort. The European countries and we have a similar history and they come from comparable roots and they have comparable institutions. The world you and I have been

> talking about is extremely complex and no single nation should undertake to do it alone if it can avoid it. So I think that is a sort of a democratic destiny and something in which the democracies should try to work together. Or if it cannot work then one has to look at other means.[218]

Rather than attempting to defend or attack this other obvious option at this point, I will first look at other means. We have found techniques of counteracting the oppressive tendencies of the rule of the stronger, and I see no reason to suspect that there are not similar techniques to counteract the terroristic tendencies of the rule of the violent. We need only look carefully and critically upon what we know of this new era, and we will already begin to see certain possibilities.

The Monadization of Power

I have said that we, indeed, *did* enter a new era following the events of September 11th, but not in a way we have recognized just yet. Many have spoken of life under constant threat of death and terrorism as a global power as representative of a new era, but this is only the more complete form of the era we entered with the Cold War, although we are just now beginning to recognize its completed form: the tyranny of each against all, and the rule of the violent. The key to understanding the new era that we are entering is not to be found in the efficacy of terrorism against us, but instead in our inefficacy against terrorism.

What is so remarkable about our attempts to bring terrorists to justice? Much has been made of the organization of terrorist groups as independent cells capable of carrying

[218] Quoted in Think Tank with Ben Wattenberg. *Henry Kissinger at Large, Part Two*. Available at: <http://www.pbs.org/thinktank/transcript1139.html>

out their missions without central leadership. It may be tempting to say that our difficulties have had to do with the lack of an *archos*, a centralized power or leader, a temptation that is indeed not without some merit. It may also be tempting to say that it is only the fact of the small number of people that has caused such difficulties for us. This also certainly has some truth to it, for it is indeed much more difficult to capture a particular single individual than a great proportion of a large group, but this is still not quite what is at issue, for this claim only holds true *if she can hide herself well*. A single individual in a known location is, of course, much easier to bring in than a larger number, and it is this condition – locatability – which provides most of the advantage gained in small numbers and in independent cells.

This strategy, which serves terrorist organizations so well, gains its efficacy only in conjunction with a sufficiently great technical ability. As we noted above, the progression of technical ability allows ever greater force to be wielded by ever smaller groups. This, of course, means that an ever greater force can be wielded suddenly and without the knowledge of those nearby. It is increasingly possible to have "sleeper" agents, to communicate in secret, without meeting, to coordinate and complete actions without being found, and the technical force which can be brought to bear through such means is ever greater. We can call this strategy 'power without location,' or *atopocracy*; power (*kratia*) without (*a-*) place (*topos*). This placelessness may arise from decentralization, anonymity, or encryption; that is, it may arise from a general distribution of technical means, through a disconnection of act from agent, or through a disconnection of activity from place. Each of these three methods will be considered to be interchangeable for the purpose of the initial speculations that follow.

Before we entered this new landscape presented by the presence of absolute force we had opposed the form of the rule of the stronger from within; we had used the power of the stronger against itself in such a way as to promote the success of the deserving over the numerous, influential, or popular. In the new structure we see ahead, we can oppose the form of the rule of the violent from within, through an atopocratic strategy, in which the success of the deserving may be promoted over the fanatical, uncaring, or suicidal. We need only adapt an atopocratic strategy beyond its current uses in guerrilla warfare and espionage. In this project, I must ask the reader to consider the following as only the most provisional and preliminary beginnings of such an adaptation and to treat this theory as speculative rather than as fully formed.

An atopocratic approach to political action is one that, as we have already noted, is only necessary given a certain level of technical ability that we have not yet attained in most areas. It is one that, unsurprisingly, also depends on that level of technical ability to effectively enable political action, and is, for this reason, very difficult for us to imagine, much less explain.

A quote attributed to William Gibson is relevant here: "The future is already with us – it's just unevenly distributed." The same tendencies in technical progression that bring us to this political situation have had similar effects in our communications, except that things have already gone a little further in our information technologies. The future possibilities of political action are already with us, in their infancy at least, but they do not yet appear political. Let us now briefly return to our first case study, in order to assist this discussion by describing a kind of atopocratic action possible in communications, but not yet possible more generally.

Before doing so, however, I should make clear exactly what I mean by "power," now that we are speaking in an explicitly political context. Thus far, by "power" I have meant nothing other than "technical force" – that is, the ability to actually bring about, through technological means, the goals of our projects in the world. Now, of course, this always already is conditioned by other kinds of social/political power which determine to a greater or lesser extent what goals we may find worth pursuing, or, indeed, the powers of persuasion and truth/knowledge claims which are needed in order to bring others to agreement for collective action towards some end. Here I am thinking specifically of Michel Foucault's depiction of the relationship between political action and power/knowledge, where we are shown that

> discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines and exposes it, renders it fragile and makes it possible to thwart it[219]

The process of realizing power in the sense of technical force certainly requires a managing of power in the social, power/knowledge sense. Here, however, it is not immediately clear to me that the structure of technological change which I intend to address will substantially alter this process, for, e.g. even where the great increase in technical force allows ever smaller groups to take violent action, although this does reduce the dependence upon dominating and controlling discourse, proportionate with the small number of persons necessary to take decisive action, nevertheless even a small and isolated group is no island, and participates in the flow of power/knowledge which

[219] Foucault, Michel. *Power/Knowledge*.

conditions their membership and non-membership within larger communities. For this reason, I ask the reader to keep in mind that by "power" I continue to mean nothing other than technical force, for this is the sense of the word "power", within a political context, which is directly dependent upon the structure of technological progress represented by radical automation. No doubt radical automation has implications for power/knowledge, but they are somewhat removed from my basic project here, and must be left aside by this investigation.

In returning to a consideration of the means of production of intellectual property, now in the light of our consideration of radical automation and in parallel with the changes brought about by radical automation in martial technologies, we will see some consistencies in the effect of radical automation in these two spheres. The process that we see in common in both places is what I will call the monadization of power. This is meant as a reference to the structure of Leibniz's monad, but is in no way meant to be an adoption of his metaphysical schema in which his monads are described.

Through radical automation, power becomes embodied in parties which are monadic in that they, like Leibniz's monads, do not admit of degrees, but are either existent in entirety or wholly absent.[220] This is a rather trivial similarity to Leibniz's monads, but the monad is nevertheless the closest description I have been able to find to the workings of power after radical automation. Radical automation brings about an equivalence in power among those able to wield its productive force: just as a monad is either present or absent, a group is either a nuclear power or it is not, and a group either is

[220] Cf. *Monadology* §1-5, but especially §6: "it may be said that a Monad can only come into being or come to an end all at once; that is to say, it can come into being only by creation and come to an end only by annihilation, while that which is compound comes into being or comes to an end by parts." Leibniz, Gottfried Wilhelm. *The Monadology*.

able to act as a publisher or it is not. Just as there can be no partial or smaller monad, there can be no minor or less important nuclear power, nor can there be a user who is less able to reproduce digital objects than any other, or a URL which is less accessible than any other.

The reader, in the discussion of the monadization of power to follow – especially with relation to martial technologies – may be reminded of Deleuze and Guattari's "Treatise on Nomadology." I believe we are discussing very much the same thing, but from different directions. Deleuze and Guattari begin from the nomadic way of life, seeing therein a parallel in warfare that recapitulates their distinction between Royal and Nomad science. Their conclusions from this starting point are in many ways similar to what I have argued regarding absolute force; e.g.

> [a] first characteristic of the numbering, nomadic or war, number is that it is always complex, that is, articulated. . . . It is exactly for this reason that it in no way implies large, homogenized quantities, like State numbers or the numbered number, but rather produces its effect of immensity by its fine articulation, in other words, by its distribution of heterogeneity in a free space.[221]

Whereas Deleuze and Guattari begin from the placelessness of the nomad in order to construct a notion of nomadological power, which is able to oppose State power by virtue of its geographical distribution, I begin from terrorism's increasing actual ability to oppose State power to construct a notion of the monadization of power, the realization of which requires the placelessness which I have called atopocracy. In this way, our analyses seem to aim towards describing the same thing, but have opposite points of

[221] Deleuze, Gilles and Felix Guattari. *A Thousand Plateaus*. Pg. 391.

departure. The analyses are, of course, rather different in important ways, the most fundamental of which is my intention to explain the implications of absolute force as it emerges from liberational automation. Since this is my purpose in articulating a notion of monadization, and since Deleuze and Guattari, to the best of my knowledge, do not recognize or address this structure within technological progression, I shall be content with having shown why it may be that my theory is similar to theirs, and shall not take it to be necessary to address in depth our disagreements with regard to the implications of this seemingly shared conceptual space, since our reasons for articulating these similar theories are, in fact, quite distant from one another.

To articulate this notion of the monadization of power more completely, let us begin with my argument from Chapter 6 above, viz. that radical automation, through the removal of accidental externalities, opens the world to the will in such a way that the intention of the user of radical automation is brought into being with minimal effort.[222] The quantitative improvement in efficiency in automation has brought about a qualitative change in the articulation of productive force, wherein parties able to wield radical automation simply cannot be compared to those unable to do so. For a publishing house to view longhand copyists as a serious threat is as absurd as a nuclear power fearing annihilation by a non-nuclear nation, but with the availability of radical automation there is a sudden comparability between even the smallest parties and the largest. Issues of degree and amount of power fall away, and power thus undergoes monadization. We will

[222] This is, of course, obscured by the methods by which people are stopped from general use of radical automation, in e.g. copying music, publicly posting software, poisoning water supplies, or gassing populations. Additionally, this may be inobvious in cases wherein the human willing in question involves something extremely complex, such as the ideas that I have embodied in this text, a process which has not been effortless for precisely this reason.

see this in play in other ways as we review radical automation in the parallel spheres of digital and martial technologies.

As access to means of mass communication becomes increasingly widespread, our copyright laws become increasingly unenforceable. It was once the case that there were only a small number of parties with access to the means of mass communication, and that these parties, even without external regulation, had no need to worry about any kind of large-scale copyright infringement. This situation is entirely analogous to the strategy of deterrence used during the Cold War: each of this small number of parties were able to produce, distribute, and sell the product paid for by the others, but could be depended on never to do so due to a reciprocal vulnerability and the great ease with which they might be identified.

With regard to record labels specifically, a system of deterrence and common interests guaranteed that there would be no gain to be had by copyright infringement. This static, seemingly stable system fell apart as the number of parties with the ability to copy and produce these commodified communications increased radically. To go through this step-by-step: the cold-war deterrence structure, like the record-label oligopoly, was based on a small number of known parties with common interests. The fragility of this situation was revealed through the proliferation of capable parties, most importantly when the requisite technical ability spread to parties lacking commonly held interests, such as Napster. As technical ability continues to increase and spread, the force which was once wielded only by record labels, and then by smaller groups as well, such as Napster, is now wielded by an great number of individual persons through peer-to-peer networks such as Gnutella and KaZaA.

Those parties formerly in undisputed control may attempt to stop this progression through the use of encryption, but, in the end, this is not a viable solution. A centralized encryption technique is always open to attack, an ever greater number of individuals have the means to compromise it, and only a single person need succeed. Like a missile shield or a levee, the defensive structure is brittle in that only a single offensive action need succeed in order to destroy that which was to be defended.

Compare the weakness of this centralized technique to the strength that the filesharing network gains through its unlocatability. Any particular portion of the network is expendable. Having located a number of machines that are parts of the network does not provide any direct information about the location of the remainder of the network. Each part must be individually located and dealt with, and a great deal of this slow and methodical work must be done before there is any significant effect on the network. Any blanket action, such as shutting down service providers in general, would affect far more bystanders than perpetrators. This filesharing network has many of the strengths that are to be found in *al-Qaeda*.

If this parallel is to be complete, it would seem that just as the record labels are akin to the former nuclear superpowers, the filesharing network is akin to a terrorist organization. This is certainly not the case, for terrorist organizations do nothing but destroy. If we look at, for example, the *Hamas* organization, we see that it is only decentralized and unlocatable insofar as it destroys what others have put in place, and that it depends on traditional centralized organizations to provide goods and services. The filesharing network, however, is a productive community. A terrorist organization attempts to disrupt the function of a political body, but the filesharing network does not

attempt to disrupt the function of a record label, but rather to *serve that same function*, but by other means. The filesharing network is, thus, not akin to a terrorist organization, but instead is akin to an atopocratic political body.

The functions that the label and the network both serve are the enabling, distribution, and popularization of certain communications. The label works according to a centralized logic: it finds those communications most likely to have the most generalized appeal and pursues those in particular, privileging not the most deserving but rather the most centrist and palatable musicians. It divides music into static genres, thereby enabling the consumer to follow a small, standardized set of musicians who are expected to produce the same kind of communication consistently. In this way, musicians are forced to fit into the "party line" in order to gain support from the label, and must choose a genre, and exhibit the attributes expected in that genre, in exactly the same way in which a politician must take care not to venture too far from the platform of her chosen party.

The network distributes without prejudice with regard to mass appeal. Popularization of musicians takes place from the bottom up, through exchange of files among friends, for example, rather than through the top-down mass production and distribution of radio stations and record stores. As the means of communication become increasingly available, it becomes ever easier to produce and distribute music, thereby making the economic support of the label increasingly unnecessary.

The political party has a platform, and the voter expects a member of the party to vote the party line on the majority of those issues. The politician who does not agree completely with the party line must to that extent act against their beliefs, and the voter

who does not agree completely with the party line must support views of which they do not approve. The greater the standardization, the more likely it is that a given political action is against the wishes and better judgment of an elected official *and* against the will and interests of the voters responsible for that official having been put in power. This is precisely the same phenomenon as that which is known, in popular music, as "selling out:" the music must become marketable, and the politician electable, in order to be supported by the centralized establishment, even though this means that both the integrity of each musician and the enjoyment of each listener must be sacrificed. This problematic standardization is beneficial for a top-down strategy, and it is for this reason that a diverse and reasonably educated and politically active nation such as our own has only two viable parties that are themselves in many ways difficult to distinguish.[223] It is also worth noting that, just as there is a homogenized genre known as "alternative" music there is an "independent" party that has only a single candidate.

When political action does not require a great number of people, sacrificing goals to mass appeal is no longer necessary. An atopocratic, bottom-up strategy of political action can section issues off from one another quite easily, and has no use for parties, assuming, as we must, that the technical abilities required for the project in question have developed to a degree such that no decisive advantage is gained in numbers. Those who work against affirmative action gain governmental representation with the support of voters who actually agree with affirmative action but who have a more overriding

[223] The Daily Show with Jon Stewart put this point forth with particular elegance, and with a level of sarcasm far greater:

"The candidate can choose one of the two platforms, but remember – no substitutions. For example, do you support universal health care? Then you must also want a ban on assault weapons. Pro-limited government? Congratulations, you are also anti-abortion. Luckily, all human opinion falls neatly into one of the two clearly defined camps. Thus, the two-party system elegantly reflects the bichromatic rainbow that is American political thought." (Daily Show with Jon Stewart. *America (The Book)*. Pg. 108)

commitment to support, for example, pro-choice legislation. Similarly, the number of votes for pro-choice representatives is affected almost as much by the voters' views on affirmative action as by their concerns with abortion. The advantage gained in standardization, and in the "bundling" of issues in a platform, is gained only where the advantage is given to the stronger and more numerous. Without mass-marketing there is a *dis*advantage to sounding like every other musician, and without the efficacy of large-scale collective action there is an identical disadvantage to attaching one issue to another.

The general shape of new possibilities open to us is hopefully becoming more clear, but I still have not yet explained how it can come to be that substantial political actions might be performed by very small numbers of individuals without any particular location. This, as I have already mentioned, is something which is now only beginning to become a real possibility, and I mean to argue here not that this *is* viable, but rather that this kind of new possibility will become *increasingly* viable.

Atopocracy

I have argued that the growing access to increasingly powerful means of destruction will inevitably render a locatable political body increasingly vulnerable. It is not unlikely that this technical progress will also bring increasing access to increasingly powerful means of *production.* Let us imagine that it is possible to bring medical assistance, perhaps vaccination, to a group with the kind of efficacy and lack of infrastructure that can be accomplished by a suicide bomber. A decentralized organization might consist in a number of individuals separately making explosives in their garages. What if this were a group making medicine in their garages, and using

small unmanned planes to airdrop the supplies? Already there are book drives for the underprivileged when a great number of United States citizens could easily print out an e-text copy of the *Iliad* from their own home. As technical progress continues to expand to the most disadvantaged, soon the great works of Western civilization will be available universally. We are decentralizing our publishers, our music labels; perhaps we will be increasingly able to do the same with health care, education, welfare, job training, and so forth.

Now that we have something of an idea of what an atopocratic strategy would consist of and depend upon, we are able to ask what role such a strategy might be able to play in the future of political action.

The nation-state ties political action and belief to location, which has been, by and large, an arbitrary and undesirable side effect of the requirement that our means of political action be able to provide a defense from those who would determine our choices by threat of violence. There is no obvious reason to suppose that our beliefs will be of a certain different sort by virtue of being born in North Dakota rather than North Korea; we can assume only that we will be *indoctrinated* with certain different beliefs – and surely that is enough for most at present, but with increasing global communication and interdependence, our perspectives broaden as well. What we may decide, as reasonable political actors, has no necessary connection to the beliefs of those who we happen to live near, and our organization of political groups by location rather than belief has had much to do with our requirement for protection of life and limb, which is now becoming less possible in a way which requires gathering together and more possible in a way which requires quite the opposite.

If we assume that the motivation for atopocracy is the ability to take action without coercion by threat of violence, then it might seem that an entirely atopocratic governmental body would be most free to act in accord with its principles. We noted above that a certain level of technical ability is necessary before an atopocratic strategy becomes possible, but we should consider as well the possibility that there may be some actions which do not benefit from, or perhaps even admit of, an atopocratic strategy, for with regard to these kinds of actions an atopocratic body would be no more free to act than a centralized and locatable body.

An atopocratic strategy is not the only kind of decentralized governance; it is a rather extreme version of what Liesbet Hooghe and Gary Marks have referred to as Type II dispersion of authority in their essay "Unraveling the Central State, but How? Types of Multi-level Governance." They write of Type I governance as local and self-governing jurisdictions which address multiple issues but which jurisdictions have non-intersecting memberships, and of Type II governance as non-local jurisdictions that address only a single issue and which may have intersecting and overlapping memberships. As they say,

> Type I and Type II governance are not merely different means to the same end. They embody contrasting conceptions of community. Type I jurisdictions are usually based on encompassing communities. Such communities are often territorial, but they may also be based on membership of a particular religious or ethnic group. . . . Type II jurisdictions are more pliable. They are set up to solve particular policy problems, such as managing a common pool resource, setting a technical standard, managing an urban service, or shipping hazardous waste. The constituencies of Type II jurisdictions

> are individuals who share some geographical or functional space and who have a common need for collective decision making—e.g. as irrigation farmers, public service users, parents, exporters, homeowners, or software producers. These are not communities of fate; membership is voluntary, and one can be a member of several such groups.[224]

Thus, we can rule out Type I jurisdictions as appropriate substrata for atopocratic political action, these being formed on the basis of identifiable groups whose relationship is determined independently of policy. Type II jurisdictions, formed on the basis of specific policy positions rather than policy-independent characteristics, are able to act with encryption or anonymity. Type II jurisdictions may, of course, be established within Type I jurisdictions, and, furthermore, while Type II jurisdictions admit of atopocratic action – provided the technical development within the field of action in question has reached a sufficient level of automation – there are certainly kinds of issues and methods which have more or less to gain from an atopocratic strategy.

The kinds of actions which seem most clearly to gain least through an atopocratic strategy are of two types: those whose concern is fundamentally local, and those whose means and execution are fundamentally local. The first has least to gain from an atopocratic strategy only because it has least to lose from a centralized locatable structure, for it stands to reason that the more fundamentally local the concern the less likely it should be of any great concern to those outside of the location in question. In addition, the radical threat of death presented by absolute force is only made

[224] Hooghe, Liesbet and Gary Marks. "Unraveling the Central State, but How? Types of Multi-Level Governance." *American Political Science Review*, 97:233-43. American Political Science Association. 2003.

unmanageable through traditional means by virtue of no longer being tied to a particular location. The second of these types of action has least to gain from an atopocratic strategy for the reciprocal reason – that, whatever the range of its import, effective action can only be taken on the issue from a local body, making an atopocratic strategy simply undesirable.

There are many concerns that are primarily local, but which nevertheless have significant far-ranging consequences, as, for example, pollution laws in Missouri have a direct but perhaps inobvious effect on water quality in Mississippi. Concerns that are more fundamentally local might include questions of land allocation, theft, public disturbances, assault, and general malfeasance and misfeasance. These day-to-day concerns of keeping social order become of a widespread concern only when policies are believed to constitute human rights abuses, although, admittedly, this may include policies as commonplace as the allowance of abortion or of capital punishment.

When we consider those concerns that require a location for any effective action, we must keep in mind that technical progress consistently tends to make possible an increasing diversity of actions to be taken at a distance, and these possibilities are often of kinds that could not have reasonably been foreseen. Nevertheless, as we must work with our best estimates and predictions, we can say at least that it seems impossible to police the streets, conduct raids, and incarcerate wrongdoers without some kind of publicly accessible centralized and local organization if these actions are to have any kind of justice whatsoever, for an atopocratic police force would not easily be distinguished from kidnappers or a lynch mob. It seems, thus, that these more local issues of protecting people from their neighbors, approximately the same as those of the first kind mentioned

above, are also the most likely candidates for concerns of this second kind, for they have little to gain through atopocratic action due to the seeming inseparability of locatability and accountability with regard to these concerns.

These concerns then being set aside, we may ask into what kinds of political action might *best* be served by an atopocratic strategy. It would seem that these would be of two kinds as well, the opposites of the above: those whose concerns are fundamentally without location, and those whose means and execution are fundamentally without location.

Of the first kind of action, we have already mentioned those having to do with human rights abuses, for surely a concern with human rights as such implies that location is inconsequential to what counts as an injustice. We might note that there are numerous other concerns having to do with health and human services that might gain from an atopocratic strategy. With the spread of access to the means of communication, it seems increasingly possible for there to be decentralized global watchdog and fact-finding organizations,[225] but we can also foresee substantive ameliorative and productive possibilities. The Red Cross and *Médecins Sans Frontiéres* undertake a kind of essentially decentralized political action not far removed from a fully atopocratic strategy, and can provide a window to the kinds of advantages which atopocracy might present to similar concerns. It has thus far seemed that other concerns in human services admitted of redress only on a local level, such as primary and secondary education, grassroots civil responsibility, consumer protection, welfare recipient job training, and inmate rehabilitation, to name a few. We can find a guide to certain atopocratic

[225] Such as the elements of the recently much-lauded "blogosphere."

possibilities for action on these general humanitarian concerns through distance learning programs, such as the program run by the University of Phoenix, or the pioneering Coastline Community College of California. Improved and increasingly accessible communication technologies assist in distance learning in general and computer simulations make possible skills training in new situations. For example, those opposed to 'sweatshop' labor are now able only to attempt to outlaw such business practices, thereby denying a source of income to those in need – a mixed blessing, at best. We might imagine that they could soon provide job training, pooling the intellectual capital of an international organization of activists, making available a desirable alternative to sweatshop labor, and thereby forcing businesses to provide competitive wages, as well as promoting the formation of locally owned businesses able to compete with foreign interests.

It is left to us now to consider those actions whose concern may not be fundamentally independent of location, but whose successful execution is nevertheless in opposition to locatability. It does not seem clear that there is any particular advantage to be gained in unlocatability outside of a greater freedom from threats and acts of violence, so it seems fair to say that actions of this kind would be those most likely to inspire hatred and violence. We might divide these actions into two categories: those which are military in nature, whether they be preemptive, preventative, defensive or supportive, and those that are not military in nature but which would provoke a military response. Those actions which are not military in nature would differ from the kinds of action discussed elsewhere only in that they would elicit opposition or hatred from parties willing and able to bring absolute force to bear, and, therefore, do not need further elucidation here. This

being said, we will then concentrate on those political actions that are military in nature. This brings us back to the type of technical progression that we first considered: increasingly accessible increasingly powerful means of destruction.

Acts of war suffer from the same difficulties as local policing in that it is difficult to imagine a just military action that is devoid of accountability and it is difficult to imagine accountability without locatability. Atopocratic military actions thus seem to be at best nearly indistinguishable from terrorist actions. This being said, we must still note that it is not unimaginable that a situation should arise in which an atopocratic military action must nevertheless be undertaken by just, responsible, and kind persons.

We considered above the worst-case scenario of a world taken hostage by a sufficiently violent, powerful, and unlocatable terrorist organization. In this case, successful opposition could not be accomplished by a centralized political body, whereas an atopocratic body might be able to neutralize such a terrorist group. Given the unlocatability of such a terrorist organization, it could not be neutralized at once without immense collateral damage, and the length of time required for a precise and carefully targeted military response would then allow the organization to easily inflict heavy losses upon any centralized force taking action against it. For this reason only another unlocatable body would be able to take effective military action against such an organization. The difficulty of distinguishing the atopocratic 'freedom fighters' from a terrorist organization is certainly troubling, but there is a defensible account available to us. In the rule of the stronger, we have used civil liberties in order to turn the will of the majority against the will of *each particular* majority, as we discussed above, insisting upon, for example, innocence until proven guilty. Here we oppose the new logic of the

rule of the violent from within, using an absolute military force only against those already using or intending to use such an absolute force. Surely this is a tenuous defense, for it could allow other motives to hide behind the aegis of the 'freedom fighter,' but we might note that this undesirable side effect is exactly analogous to one which we have already learned to live with in the rule of the stronger, where racism and child pornography can too easily hide behind claims of the freedoms of speech and assembly.

We have now considered the kinds of political actions that would be best and worst served by an atopocratic strategy. There are certainly many cases that fall between these extremes, and many political concerns that have not been addressed. Our purpose in these considerations, however, is not to conduct an exhaustive investigation of the benefits and limits of atopocracy but rather to ask into the relation which atopocracy might have to, for example, democracy. There may be cases in which a democratic nation-state might be ineffective, or where the democratic process may fail to act justly. In these cases, an atopocratic body may be able to succeed where the nation-state fails, either by fixing a problem using the different means available to it or by righting an injustice of which the masses are unaware or unconcerned. We should note, however, that this is most appropriately regarded as a supplement or failsafe, not as a replacement. The actions of an anational body relieve the responsibility of a state to its citizens no less than the actions of an international body, and just as we do not wish to engender Third World dependence upon United Nations and International Monetary Fund assistance for economic solvency, we ought to avoid, for example, First World dependence upon atopocratic intervention for meeting the requirements of social justice and human rights.

Even now there is a corrective role that an anational political body can play, independent from our original considerations having to do with the threat of absolute force. Where the will of the public at large does not manifest itself, or where an improper decision is made on the basis of private or nationalistic concerns, anational associations might succeed. For example, something like the Kyoto agreement need not arise from publicly elected officials, who might be forced to sacrifice the long-term benefits of environmental responsibility for the short-term benefits of being able to stay in office to work on other fronts for what they believe to be the public good, and who might have a responsibility to concern themselves first and foremost with the citizens of their own nation over and above the good of the global community. Persons acting independently of national association are more able, although not necessarily more likely, to act in the best interests of the public as a whole, and businesses might be able to come to such agreements among themselves, if motivated by consumers, shareholders, employees, management, and owners. The elected officials of a nation-state have a positive obligation to engage in favoritism, and the means to counteract this unfortunate and unavoidable attribute of the nation-state are already in some significant respects available to the global community.

Towards A Moderate Solution

At this point, we can return to the question of what is to be done in response to this crisis in national security. As we have already noted, the crisis in national security is a developing crisis, less fully realized than the crisis in copyright. We have no need to consider the sudden demise of the nation-state as the preeminent political body in

international relations; this will most certainly not happen anytime soon. And, while the crisis in national security does not press time constraints upon us in the way that the crisis in copyright does, the former certainly has more dire consequences for missteps than the latter, for only in the former do lives truly lay in the balance, and we have much less experience with and reason for confidence in atopocratic political action than with e.g. open-source and free software. All three of these considerations call for cautious gradual change in dealing with the crisis in national security and for radical immediate change in dealing with the crisis in copyright.

Where in copyright, the intellectual property industries themselves became (economically) revolutionary through radical automation, turning against capitalist employment of their productive power, in national security, the martial application of technology is becoming (politically) revolutionary through radical automation, turning against the effective centralized use of their destructive powers by the nation-state. The monadization of power in both cases brings a sudden equivalence between the greatest and the weakest, and the last becomes first. The capitalist producers have responded by (a) stockpiling material useful for radical automation in advanced accumulation, (b) preventing the use of radical automation in systematic colonization, and (c) instituting an unchanging caste system, based upon ability to use radical automation in, informational feudalism. The nation-state, insofar as it takes action against this monadization, also follows these three tactics by (a') stockpiling material useful for radical automation in anti-proliferation efforts, by (b') preventing the use of radical automation in preemption, and by (c') instituting an unchanging caste system, based upon ability to use radical automation, in a Pax Americana. We are now ready to articulate these three parallel

reactions on the part of the capitalist producers and the nation-state, and to offer an assessment of our proper action in relation to these reactions against the tendencies of technology.

(a'). Stockpiling.

Just as the capitalist holdovers in the software and culture industries use public funding to seize the material within the public sphere applicable to the productive use of radical automation, the nation-state that is threatened by the monadization of power seeks to seize the material within the public sphere applicable to the destructive use of radical automation. These nation-states, the United States and European Union members especially, have a vested interest in securing nuclear secrets, methods of manufacture and deployment of bio-chemical weaponry, and purchasing fissionable material and spent nuclear fuel rods. In these ways, deprived of material to use in radical automation, the predominance of centralized powers may be retained even after power has become monadic.

Our assessment of this response should be quite opposite in the two cases, for in the former the public is kept from productive use of technology while in the latter the public is kept from destructive use of technology. Except in the case of a unipolar, internally abusive and globally imperialist superpower, the needs of military opposition to regimes are better accomplished through international laws and accords than acts of war and violence taken by either independent states or non-governmental bodies. As this unjust unipolar superpower is merely a possibility, although the United States is certainly moving in this direction in international affairs, and as unjust violent non-governmental

bodies are actual and in a period of expansion besides, it seems that we can easily conclude that our primary worry in the near- and medium-term lies in proliferation rather than in monopolization of the means of mass destruction.

(b'). Preventing use.

Just as the capitalist holdovers in the software and culture industries prevent the productive use of radical automation by preemptive deterrence, making "examples" of parties in order to discourage this use, and constant and pervasive monitoring, the nation-state which is threatened by the monadization of power seeks to prevent the destructive use of radical automation by preemptive deterrence, making "examples" of parties in order to discourage this use, and constant and pervasive monitoring. Through preemptive military action against parties known to be hostile to centralized powers, the United States and others prevent use of destructive power in a way similar to the use of closed-sourcing and encryption in the systematic colonization of information: in both cases parties are prevented from using the means available prior to their necessarily having taken any particular action against the centralized power. By harsh actions against a few of those who support, fund, knowingly allow, or themselves take actions against the centralized powers, nation-states discourage use of radical automation in the same way as the software and culture industries do by intense and disproportionate prosecution against ISPs, contributory infringers, and infringers themselves. Finally, through intensive intelligence gathering, nation-states seek to prevent use of radical automation in the same way in which information peddlers use their monitoring of newsgroups, BBSs, webpages and p2p networks.

Again, as with the parallel strategies of stockpiling material for use, we should come to oppose conclusions in these parallel strategies of preventing use, and for the same reasons. The productive use of radical automation stands to benefit society, whereas the destructive use of radical automation throws society into fear and uncertainty and brings about a poor allocation of social resources and brings a chilling effect to political and cultural actions through the pervasive possibility of violent response from known and unknown parties. The general ability to employ radical automation productively expands and diversifies our cultural and economic progress, while the general ability to employ radical automation destructively slows and narrows the avenues of this progress.

(c'). The attempt to institute an unchanging caste system based upon ability to use radical automation.

Just as the significant and increasing public availability of monadic productive power has made unavailable a return to a capitalist economy in the software and culture industries, forcing centralized powers to attempt to bring about informational feudalism, the significant and increasing public availability of monadic destructive power has made unavailable a return to a global politics based around the relations of independent nation-states, forcing centralized powers threatened by the monadization of power to attempt to bring about a Pax Americana. As Benjamin Barber makes the case,

> If America can no longer insulate itself from the planet, the eagles say, then it must, in effect, rule the planet. If American sovereignty is compromised within its borders by a new interdependence that defies internal boundaries, America's

> borders must be extended to bring in and assimilate regions dangerous to the Unites States. . . . If the world has grown too small for America to defend its universal rights in isolation, then America must become a universal presence: Q.E.D., Pax Americana.[226]

The movement towards informational feudalism is the attempt to bring about an absolute separation of the many from productive employment of radical automation for their own purposes, thereby transforming competing capitalist producers to noble houses and guilds needing to negotiate with and take seriously only one another, and reducing those who are not a part of a guild or noble house to a subservient status. Similarly, the movement towards Pax Americana is the attempt to bring about an absolute separation of the many from destructive employment of radical automation for their own purposes, thereby transforming once independent nations into a coalition of a few powerful nations needing to negotiate with and take seriously only one another, and reducing those who are not a part of this privileged group to a subservient status. Again, in Barber's words,

> Pax Americana, like the imperial Roman hegemony (Pax Romana) on which it models itself, envisions global comity imposed on the world by unilateral American military force – with as much cooperation and law as does not stand in the way of unilateral decision making and action.[227]

The member states of the Pax Americana thus say, in effect, "Join us under the protective blanket or be destroyed,"[228] or, in George W. Bush's famous formulation of what

---

[226] Barber, Benjamin. *Fear's Empire*. Pgs. 67-8.

[227] Ibid, pgs. 35-6.

[228] Ibid, pg. 67.

amounts to the same, "You're either with us or with the terrorists." Nations and political groups would be either born into nobility by their possession of the means of bringing absolute force to bear or forced into serfdom, surviving through subservience to the few powerful nations within the Pax Americana or living in constant danger and deprivation as a peasant with no lord and without membership to a guild, cut off from the means of bringing about their own independence. In this way there would be an exclusive and hypocritical distribution of the ability to develop and employ radical automation: just as in informational feudalism the few are given exclusive right to profit from what is publicly held, in the Pax Americana the few are given exclusive right to employ preemptive and absolute force of technology which is in principle available to all. Thus, we see in both informational feudalism and Pax Americana the vision of the complete and self-sustaining success of the stockpiling and prevention of use of radical automation. Both are systems in which centralized powers retreat from the competitive structure under which they had gained preeminence, and under which their preeminence is threatened by the monadization of power, this retreat being articulated in the form of bringing about a stabilization of the spreading possession of monadic power, allowing them to retain preeminence at the expense of caste mobility and the growth and independence of those not already possessing monadic power.

Here, unlike the movements of stockpiling and use prevention, our assessment of the response against the spread of monadic power ought to be at least somewhat similar in both cases. Here, again, I agree with Barber. While anti-proliferation and preemptive efforts are justifiable and beneficial in some if not many circumstances, the general

strategy of bringing about a structure of dominance and servitude will neither help bring about nor keep peace. A far better solution – in congress with some anti-proliferation and preemptive efforts – is what Barber calls *Lex Humana* or preventative democracy. As he presents the idea,

> Preventative democracy assumes that the sole long-term defense for anarchy, terrorism, and violence is democracy itself: democracy within nations and democracy in the conventions, institutions, and regulations that govern relations among, between and across nations.[229]

By equal political inclusion of parties regardless of their possession of monadic power and by the willingness of monadic powers to be subject to the same rule of law as non-monadic powers[230] an independent and relevant political voice can be given over to the many without the requirement that they first gain monadic power. Similarly, by fostering democratic institutions, and by more generally aiding in the development of institutions which give voice to disenfranchised parties both domestically and abroad, the allure of the political strength granted through the threat of violence will be lessened to an extent that this will represent a benefit lesser than the costs of retaliation.

In this way, we see that there is a middle ground between Pax Americana and a full shift to atopocracy, just as there is a middle ground between informational feudalism and a full elimination of intellectual property rights. Through open-sourcing, share- and free-ware, and a radical lessening of copyright terms, the means of production are given

---

[229] Ibid, pg. 146.

[230] E.g., taking the UN seriously, joining the international court in the Hague, not engaging in unilateral preemptive military action against sovereign nations, and generally avoiding what Barber rightly calls 'American exceptionism.'

over to the public to an extent that the public will be able to realize their own goals and pursue their own projects and still respect private possession of information to an extent which would still allow for capitalist employment of digital objects. Similarly, through empowering citizens globally, political weight is given to disenfranchised parties to an extent that they can pursue their personal and political interests and still respect the preeminence of certain nation-states.

Barber believes the global empowerment of preventive democracy can be accomplished through means very much akin to my description of just atopocratic political bodies. As he explains, "In the new forms of citizen-to-citizen interaction called for by preventive democracy, citizens and their civic associations represent themselves, seeking global forms of democratic governance founded on civic and third sector cooperation."[231] Through the action of groups such as the ICBL (International Campaign to Ban Landmines), Human Rights Watch, Physicians for Human Rights, ATTAC (Action pour la Taxation des Transactions Financieres pour l'Aide aux Citoyens), and MoveOn.org, he argues that "global public opinion has taken to the streets in recent years, making its voice felt as well as heard."[232] I could not agree more with Barber in his assertion that groups such as these bring about an integrated and civilized world, and that it is through the growth in scope and influence of these atopocratic bodies the movement towards monadic power can most efficiently and permanently be lessened and hopefully eventually effectively eliminated. In this way we can use global democracy to oppose the

[231] Ibid, pg. 205.

[232] Ibid, pg. 207.

tyranny of each against all from within its own structure, just as we have used state democracy to oppose the tyranny of all against each from within its own structure.

I must, however, add that as technology continues to progress, we will see new possibilities for atopocratic action, and our early recognition of this fact may be crucial in ensuring that these changes support the good of the many and do not trample the rights of the few.

CONCLUDING REMARKS

In automation, the world is constituted in such a way that it is as if it shared the will of its author, bringing the will into being through causally deterministic events. In early automation, this is alienating, for early automation must outsource the proper means of human action. In radical automation, this becomes liberational, for automation which nears completion outsources primarily or entirely the accidental externalities of the automated process, leaving the proper means to be determined by the labourer. This radical automation represents a quantitative change sufficient to constitute a qualitative difference, and brings about the monadization of power, for the employer of radical automation is able to bring such a massive amount of power to bear in their projects that there becomes an effective equivalence between all parties able to employ radical automation. This monadization in turn brings about a revolutionary structure within technology itself, wherein parties who had consolidated power are brought low by monadization, and can no longer depend on their quantitative advantage in order to establish dominance over less powerful parties.

Centralized and formerly indisputably controlling parties engage in three strategies of resistance against the newly revolutionary structure of their own technological means, two which are short- and medium-term methods of slowing this change, and one which is a long-term goal encompassing the first two, and which would be self-sustaining unlike the first two. First, pre-revolutionary parties attempt to stockpile revolutionary technologies, second, they attempt to prevent use of revolutionary

technologies, and third, they attempt to institute an unchanging caste system based upon ability to use radical automation.

In this analysis, we see that the structure of technological change in the development of ever more complete automation brings about upheavals in the institutions based upon these technologies. To oppose this change seems to me foolish due to the fundamental nature of the changes that brought about these upheavals. To wish for a world of few publishers – a world without file-sharing – is as harmfully and ignorantly nostalgic as to wish for a world without cars and power plants. This new world is one of freedom, and liberation.

Freedom and liberation are not without costs. We must consign the power of numbers to nostalgia as well. The majority can no longer count on having the upper hand, and those who are cruel and hateful are as freed and as empowered by this process as anybody else. The great powers now at hand can be applied to the production of art, or to tools of commerce, but they may also be applied to the production of mass death.

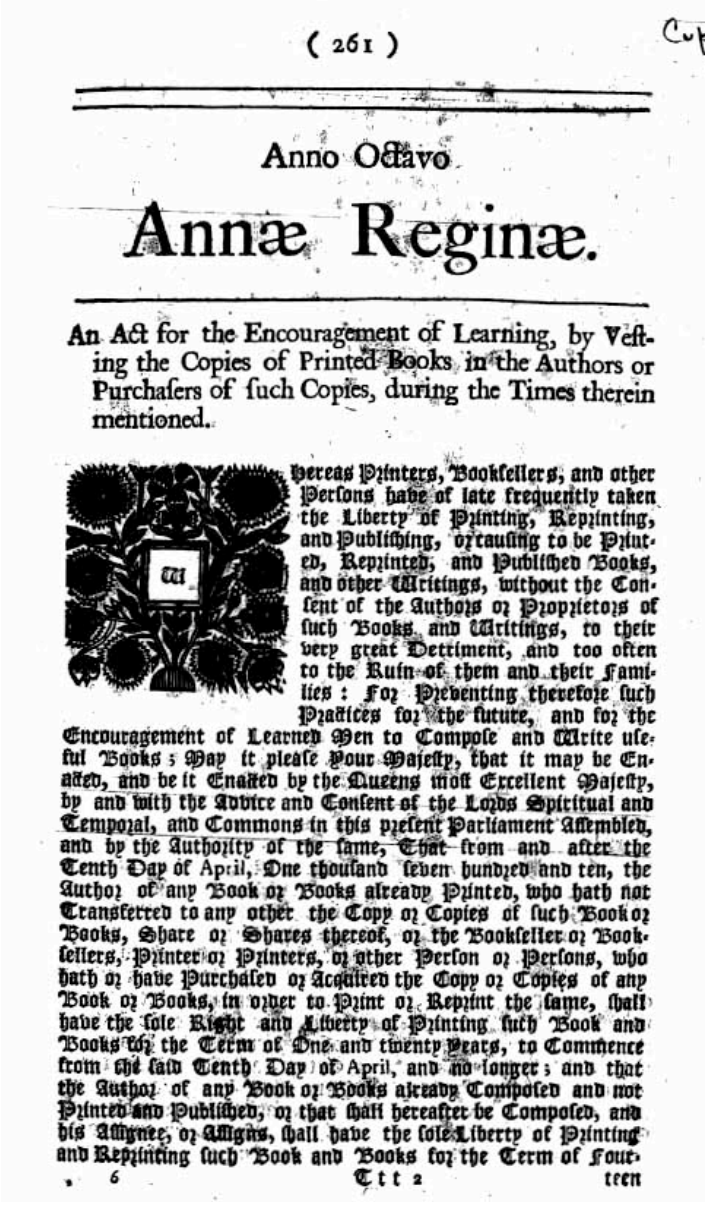
The challenge we have before us is the same as it always has been: to take the possibilities of the world in which we find ourselves and to work towards the maximization of their best aspects. To do this we must realize that the world has changed. We are cursed to live in interesting times.

APPENDIX

APPENDIX A

LEGAL DOCUMENTS

First page, Statute of Anne, England, 1710



(261)

Anno Octavo

Annæ Reginæ.

An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned.

Whereas Printers, Booksellers, and other Persons have of late frequently taken the Liberty of Printing, Reprinting, and Publishing, or causing to be Printed, Reprinted, and Published Books, and other Writings, without the Consent of the Authors or Proprietors of such Books and Writings, to their very great Detriment, and too often to the Ruin of them and their Families: For Preventing therefore such Practices for the future, and for the Encouragement of Learned Men to Compose and Write useful Books; May it please Your Majesty, that it may be Enacted, and be it Enacted by the Queens most Excellent Majesty, by and with the Advice and Consent of the Lords Spiritual and Temporal, and Commons in this present Parliament Assembled, and by the Authority of the same, That from and after the Tenth Day of April, One thousand seven hundred and ten, the Author of any Book or Books already Printed, who hath not Transferred to any other the Copy or Copies of such Book or Books, Share or Shares thereof, or the Bookseller or Booksellers, Printer or Printers, or other Person or Persons, who hath or have Purchased or Acquired the Copy or Copies of any Book or Books, in order to Print or Reprint the same, shall have the sole Right and Liberty of Printing such Book and Books for the Term of One and twenty Years, to Commence from the said Tenth Day of April, and no longer; and that the Author of any Book or Books already Composed and not Printed and Published, or that shall hereafter be Composed, and his Assignee, or Assigns, shall have the sole Liberty of Printing and Reprinting such Book and Books for the Term of Four-

6 Ttt 2 teen

Selections, Intellectual Property Code (Legislative Part), France.

Intellectual Property Code (Legislative Part)

Pt. 1, Book I, Title I, Ch. 1, *Art. L. 111–1*:

The author of a work of the mind shall enjoy in that work, by the mere fact of its creation, an exclusive incorporeal property right which shall be enforceable against all persons.

This right shall include attributes of an intellectual and moral nature as also attributes of an economic nature, as determined by Books I and III of this Code.

The existence or conclusion of a contract for hire or of service by the author of a work of the mind shall in no way derogate from the enjoyment of the right afforded by the first paragraph above....

Art. L. 111–3. :

The incorporeal property right set out in Article L. 111–1 shall be independent of any property right in the physical object.

Acquisition of such object shall not vest in the acquirer of the object any of the rights afforded by this Code, except in those cases referred to in the provisions of the second and third paragraphs of Article L. 123–4 . These rights shall subsist in the person of the author or of his successors in title who, nevertheless, may not require the proprietor of the physical object to make such object available to them for the exercise of those rights....

Chapter II, *Art. L. 112–3.*:

The authors of translations, adaptations, transformations or arrangements of works of the mind shall enjoy the protection afforded by this Code, without prejudice to the rights of the author of the original work. The same shall apply to authors of anthologies or collections of various works which, by reason of the selection and arrangement of their contents, constitute creations of the mind.

Title II, *Art. L. 121–1*:

An author shall enjoy the right to respect for his name, his authorship and his work.

This right shall attach to his person.

It shall be perpetual, inalienable and imprescriptible. It may be transmitted *mortis causa* to the heirs of the author.

Selections, Copyright Law (Urheberrechtsgesetz), Germany.

Part 1 Section II Works ...
Article 3 Adaptations

Translations and other adaptations of a work which constitute personal intellectual creations of the adapter shall enjoy protection as independent works without prejudice to copyright in the work that has been adapted. Insignificant adaptations of a non-protected musical work shall not enjoy protection as independent works....

Section IV Scope of Copyright
1. General
Article 11

Copyright shall protect the author with respect to his intellectual and personal relationship with his work, and also with respect to utilization of his work.

2. Moral Rights of Authors
Article 12 Right of Publication

(1) The author shall have the right to decide whether and how his work is to be published.

(2) The author shall have the exclusive right to publicly communicate or describe the content of his work for as long as neither the work nor its essence nor a description of the work has been published with his consent.

Article 13 Recognition of Authorship

The author shall have the right of recognition of his authorship of the work. He may decide whether the work is to bear an author's designation and what designation is to be used.

Article 14 Distortion of the Work

The author shall have the right to prohibit any distortion or any other mutilation of his work which would jeopardize his legitimate intellectual or personal interests in the work.

3. Exploitation Rights
Article 15 General

(1) The author shall have the exclusive right to exploit his work in material form; his right shall comprise in particular:

1. the right of reproduction (Article 16);

2. the right of distribution (Article 17);

3. the right of exhibition (Article 18).

(2) The author shall further have the exclusive right to communicate his work to the public in non-material form (right of communication to the public); his right shall comprise in particular:

1. the right of recitation, performance and presentation (Article 19);
2. the right of broadcasting (Article 20);
3. the right of communication by means of video or audio recordings (Article 21);
4. the right of communication of broadcasts (Article 22).

APPENDIX B

CIRCUMVENTION DEVICES

The CSS, or "Content Scrambling System," is an encryption scheme used by DVD manufacturers and supported by the MPAA as a way to allow digital copies of movies to be watched without allowing user access to the information. The CSS also keeps users from legal uses of their purchases projects. As Tom Vogt, the author of *DeCSS Central* explains,

> Copyright law not only forbids copying, it also explicitly allows it for certain uses, for example personal use and educational use (both within defined limits), as well as use of snippets in reviews and many other places. All this allowed copying of copyrighted material is summarized as "fair use." CSS makes fair use impossible. I cannot take a screenshot of my favorite movie to use as a desktop wallpaper. A teacher could not copy a snippet out of a movie to show to his english class. And don't even get me started about region codes.[233]

Furthermore, the DeCSS code is illegal to possess without licensing from the DVD Copy Control Association. I have not been able to ascertain the initial cost of licensing, but "the DVD CCA annual administrative fee is $15,000 per license category (except for Associate Licenses which are $5,000),"[234] where the license categories are as follows:

---

[233] Vogt, Tom. *DeCSS Central – Disclaimer*. <http://www.lemuria.org/DeCSS/disclaimer.html>

[234] DVD CCA. *DVD CCA Welcomes You!* <http://www.dvdcca.org/>

• Process A - For Resellers and Assemblers.
    • For obtaining General Information, a CSS Associate Licensee, and a CSS License Certificate use this Process.
• Process B - For Content Providers, Authoring Studios, and DVD Disc Replicators.
    • For obtaining confidential information, a CSS License, and a CSS License Certificate use this process.
• Process C - For DVD Disc Formatter Manufacturers, DVD Player Manufacturers, DVD-ROM Drive Manufacturers, DVD Decoder Manufacturers, Descramble Module Manufacturers, Authentication Chip Manufacturers for DVD-ROM Drives, Authenticator Manufacturers for DVD Decoders, Verification Product Manufacturer, Integrated Products Manufacturer
    • For obtaining Highly Confidential information, a CSS License, and a CSS License Certificate use this process.[235]

It is unclear to me which of these licenses would be appropriate if one wished to obtain a license to avoid being guilty of circumvention of an encryption device under DMCA §1201(a) and California's 'trade secret' laws by application of the DeCSS in order to exercise ones rights of fair use as described by Tom Vogt above. It is also a point of some legal ambiguity whether these laws prevent possession of the following versions of the DeCSS code, since they cannot be run in their current form. If so, then you are in possession of a circumvention device, and are currently committing a criminal act.

[235] DVD CCA. *DVD CCA – CSS.* <http://www.dvdcca.org/css/>

1. DeCSS implementation in C, written by Frank Stevenson[236]

```
#include<stdlib.h>
typedef unsigned int uint;
char
ctb[512]="33733b2663236b763e7e362b6e2e667bd393db0643034b96de9ed60b4e0e4\
69b57175f82c787cf125a1a528fca8ac21fd999d10049094190d898d001480840913d7d352
46\d2d65743c7c34256c2c6475dd9dd5044d0d4594dc9cd4054c0c449559195180c989c11
058185\081c888c011d797df0247074f92da9ad20f4a0a429f53135b86c383cb165e1e568bc
e8ec61bb\3f3bba6e3a3ebf6befeb6abeeaee6fb37773f2267276f723a7a322f6a2a627fb9f9b
1a0e9a9e\1f0b8f8b0a1e8a8e0f15d1d5584cd8dc5145c1c5485cc8cc415bdfdb5a4edade5f4
bcfcb4a5e\cace4f5397931206929617038783021682860 71b7f7bfa2e7a7eff2bafab2afeaaa
e2ff";typedef unsigned char uchar;uint tb0[11]={5,0,1,2,3,4,0,1,2,3,4};uchar* F=NULL;
uint lf0,lf1,out;void ReadKey(uchar* key){int i;char hst[3]; hst[2]=0;if(F==\
NULL){F=malloc(256);for(i=0;i<256;i++){hst[0]=ctb[2*i];hst[1]=ctb[2*i+1];F[i]=\
strtol(hst,NULL,16);}}out=0;lf0=(key[1]<<9)|key[0]|0x100;lf1=(key[4]<<16)|(key\
[3]<<8)|key[2];lf1=((lf1&0xfffff8)<<1)|(lf1&0x7)|0x8;}uchar Cipher(int sw1,\
int sw2){int i,a,b,x=0,y=0;for(i=0;i<8;i++){a=((lf0>>2)^(lf0>>16))&1;b=((lf1\
>>12)^(lf1>>20)^(lf1>>21)^(lf1>>24))&1;lf0=(lf0<<1)|a;lf1=(lf1<<1)|b;x=(x>>1)\
|(a<<7);y=(y>>1)|(b<<7);}x^=sw1;y^=sw2;return out=(out>>8)+x+y;} void \
CSSdescramble(uchar *sec,uchar *key){uint i;uchar *end=sec+0x800;uchar KEY[5];
for(i=0;i<5;i++)KEY[i]=key[i]^sec[0x54+i];ReadKey(KEY);sec+=0x80;while(sec!=\
end)*sec++=F[*sec]^Cipher(255,0);}void CSStitlekey1(uchar *key,uchar *im)
{uchar k[5];int i; ReadKey(im);for(i=0;i<5;i++)k[i]=Cipher(0,0);for(i=9;i>=0;\
i--)key[tb0[i+1]]=k[tb0[i+1]]^F[key[tb0[i+1]]]^key[tb0[i]];}void CSStitlekey2\
(uchar *key,uchar *im){uchar k[5];int i;ReadKey(im);for(i=0;i<5;i++)k[i]=\
Cipher(0,255);for(i=9;i>=0;i--)key[tb0[i+1]]=k[tb0[i+1]]^F[key[tb0[i+1]]]^key\
[tb0[i]];}void CSSdecrypttitlekey(uchar *tkey,uchar *dkey){int i;uchar im1[6];
uchar im2[6]={0x51,0x67,0x67,0xc5,0xe0,0x00};for(i=0;i<6;i++)im1[i]=dkey[i];
CSStitlekey1(im1,im2);CSStitlekey2(tkey,im1);}
```

[236] Stevenson, Frank. *http://www-2.cs.cmu.edu/~dst/DeCSS/FrankStevenson/shortest-anonymous-code.txt.*

2. ASCII art version by Alex Bowley at al.[237]

```
/*efdtt.c     Author:  Charles M. Hannum
<root@ihack.net>*/
/*                                                          */
/*Thanks to Phil Carmody <fatphil@asdf.org> for
additional tweaks.*/
/*                                                          */
/*DVD-logo shaped version by Alex Bowley
<alex@hyperspeed.org>*/
/*                                                          */
/*Usage is:  cat title-key scrambled.vob | efdtt
>clear.vob*/


#define m(i)(x[i]^s[i+84])<<

       unsigned char x[5]      ,y,s[2048];main(
       n){for( read(0,x,5     );read(0,s ,n=2048
                ); write(1   ,s,n)         )if(s
      (y=s      [13]%8+20]  /16%4  ==1      ){int
      i=m(      1)17  ^256 +m(0)   8,k      =m(2)
      0,j=      m(4)   17^ m(3)   9^k*     2-k%8
      ^8,a     =0,c    =26;for   (s[y]    -=16;
     --c;j  *=2)a=     a*2^i&    1,i=i /2^j&1
     <<24;for(j=        127;     ++j<n;c=c>
                         y)
                         c

                +=y=i^i/8^i>>4^i>>12,
       i=i>>8^y<<17,a^=a>>14,y=a^a*8^a<<6,a=a
     >>8^y<<9,k=s[j],k         ="7Wo~'G_\216"[k
      &7]+2^"cr3sfw6v;*k+>/n."[k>>4]*2^k*257/
            8,s[j]=k^(k&k*2&34)*6^c+~y
                        ;}}
```

[237] Bowley, Alex. *DVDlogo.c*. <http://www-2.cs.cmu.edu/~dst/DeCSS/Gallery/bowley-efdtt-dvdlogo.html>

REFERENCES

Accra Mail. *Ghana: Microsoft to conduct raids on pirates*. Nov. 2001. AfricaOnline.com. 14 Feb. 2003. <http://www.africaonline.com/site/Articles/1,3,43260.jsp>

Adherex. *Adherex Issued New US Patent for Vascular Targeting Agents*. 2 Oct. 2003. Adherex.com. 11 Mar. 2004. < http://www.adherex.com/news2Oct2003.htm>

Adobe Systems Inc. *Alice in Wonderland (World Digital Library Edition)*. Adobe.com. 12 May 2004. <http://digitalmediastore.adobe.com/13063350-E181-4D0E-9838-FBBCE9486183/10/21/en/ContentDetails-drm.htm?ID=BB28F0A2-86B5-4796-A523-1B08074CD2E1>

Adobe Systems Inc. and Art Medlar. *Alice in Wonderland*. 13 Dec. 2000. Pigdogs.org. 12 May 2004. <http://www.pigdogs.org/art/adobe.html>

AllAboutJazz.com. *Maria Schneider - 4 Grammy nods and NOT ONE RETAIL SALE!* 8 Dec. 2004. AllAboutJazz.com. 1 Oct. 2005. <http://www.allaboutjazz.com/php/news.php?id=4785>

American Bar Association Section of Intellectual Property Law, *Section White Paper on "Agenda for 21st Century Patent Reform."* 16 Sept. 2005. American Bar Association. 23 July 2006. Available at: <http://www.abanet.org/intelprop/home/PatentReformWP.pdf>

Andrews, Greg. (Agent000) *A Visit From the Software Gestapo*. Dec. 2001. Posted to Kuro5hin.org. 14 Feb. 2003. <http://www.kuro5hin.org/story/2001/12/18/2042/8631>

Assemblée nationale française. *Intellectual Property Code (Legislative Part)(Loi relative au code de la propriét, intellectuelle [partie législative])*. 1995. WIPO International Bureau trans. Collection of Laws for Electronic Access (CLEA). 12 Feb. 2003. <http://clea.wipo.int/clea/lpext.dll/Folder/Infobase/188c1/189c8?fn=document-frame.htm&f=templates&2.0>.

Associated Press and Reuters. *Pharmaceutical firms to slash cost of AIDS drugs for Africa*. 11 May 2000. CNN.com. 9 Mar. 2004. <http://www.cnn.com/2000/WORLD/africa/05/11/aids.africa/>

Association Electronique Libre. *EUCD-Status*. 2003. Association Electronique Libre. 12 Feb. 2003. <http://wiki.ael.be/index.php/EUCD-Status>.

Baker, Dean. "The Reform of Intellectual Property," in *Post-Autistic Economics Review*. Issue 32, 5 July 2005. Available online at: <http://www.paecon.net/PAEReview/issue32/Baker32.htm>

Barber, Benjamin. *Fear's Empire*. New York: W. W. Norton. 2003.

Becker, Lawrence. *Property Rights: Philosophical Foundations*. Boston: Routledge & Kegan Paul Ltd. 1977.

Bell, Tom W. "Indelicate Imbalancing in Copyright and Patent Law," in *Copy Fights: the Future of Intellectual Property in the Information Age*, Adam Thierer and Clyde Wayne Crews Jr. eds. Washinton D.C.: Cato Institute. 2002.

Biever, Celeste. *3D printer to churn out copies of itself*. 18 Mar. 2005. NewScientist.com. 9 Apr. 2005. <http://www.newscientist.com/article.ns?id=dn7165>

Borland, John. *Hollywood cracks down campus pirates*. Oct. 2002. ZDNet News. 14 Feb. 2003. <http://zdnet.com.com/2100-1106-961637.html>

Borland, John. *Labels target CEOs over file swapping*. Oct. 2002. ZDNet News. 14 Feb. 2003. <http://zdnet.com.com/2100-1106-963208.html>

Bowley, Alex. *DVDlogo.c*. DeCSS Gallery. 3 Oct. 2004. <http://www-2.cs.cmu.edu/~dst/DeCSS/Gallery/bowley-efdtt-dvdlogo.html>

Bowman, Lisa M. *Broadband fans busted over Gnutella*. Apr. 2001. clnet News.com. 14 Feb. 2003. <http://news.com.com/2100-1023-255961.html>

Bowman, Lisa M. *ElcomSoft verdict: Not guilty*. Dec. 2002. clnet News.com. 14 Feb. 2003. <http://news.com.com/2100-1023-978176.html>

Bowman, Lisa M. *Navy raids student pirates*. Nov. 2002. clnet News.com, archived at ZDNet U.K. 14 Feb. 2003. <http://news.zdnet.co.uk/story/0,,t272-s2126527,00.html>

Bowman, Lisa. *Study: Napster boosts CD sales*. 2003. ZDNet News. 12 Feb. 2003. <http://zdnet.com.com/2100-11-522383.html>

Breyer, Justice Stephen, Supreme Court of the United States. *Eldred v. Ashcroft, (537 01-618), Majority Opinion*. Jan. 2003. Legal Information Institute, Law School, Cornell University. 24 Sept. 2004. <http://supct.law.cornell.edu/supct/html/01-618.ZD1.html>

Brooks, Leon. *Picking up Your Marbles*. 2003. Linux Australia. 12 Feb. 2003. <http://linux.org.au/~leonb/articles/picking-up-your-marbles.html>.

BrotherSoft. *Word Processors Software Download*. BrotherSoft.com. 8 Mar. 2004. <http://www.brothersoft.com/Utilities_Word_Processors_Download_List_1.html >

Brudney, Daniel. "Community and Completion," in *Reclaiming the History of Ethics: Essays for John Rawls*, Andrews Reath, Barbara Herman, and Christine M. Korsgaard, eds. Cambridge: Cambridge University Press. 1997.

Buckman, Rebecca. *Microsoft loads up for pirate raids*. Aug. 2000. ZDNet.com, archived from The Wall Street Journal Online. 14 Feb. 2003. <http://zdnet.com.com/2100-11-522676.html?legacy=zdnn>

Business Software Alliance. *Nationwide Intensification of Raids on Illegal Software Users Begin in Kuala Lumpur*. Sept. 2001. Press Room, BSA.org. 14 Feb. 2003. <http://www.bsa.org/malaysia/press/newsreleases/2001-09-26.718.phtml>

Callan, David. *How click-wrap contracts benefit over shrink-wrap contracts*. akamarketing.com. 3 Oct. 2004. <http://www.akamarketing.com/click-wrap-shrink-wrap-contracts.html>

Cohen, G.A. *Karl Marx's Theory of History: A Defence*. Princeton: Princeton University Press. 1978.

Cohen, Yvan. *Software Piracy is rampant in Asia*. Dec. 1997. Christian Science Monitor, archived at Department of Computer Science, University of Saskatchewan. 14 Feb. 2003. <http://www.cs.usask.ca/undergrads/ljh886/articles/intellectualProperty.htm> Original URL: <http://csmweb2.emcweb.com/durable/1997/12/29/intl/intl.1.html>

Commission on Intellectual Property Rights. *Integrating Intellectual Property Rights and Development Policy*. 12 Sept. 2002. IPRCommission.org. 23 July 2006. <http://www.iprcommission.org/graphic/documents/final_report.htm>

Compact Disc MAP Litigation Administrator. *Information Web Site for the In re: Compact Disc Minimum Advertised Price Antitrust Litigation Settlement*. Date of last update unknown. MusicCDSettlement.com. 14 Feb. 2003. <http://www.musiccdsettlement.com/>

Concertshots, *JOHN MAYER FULL INTERVIEW 12502*. Concertshots.com. 18 Feb. 2005. <http://concertshots.com/john_mayer_full%20interview%2012502.htm>

Congress of the United States of America, One Hundred Fifth. *Digital Millennium Copyright Act*. 1998. U.S. Government Printing Office. 12 Feb. 2003. <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_bills&docid=f:h2281enr.txt.pdf>

Contact Pakistan. *Raids continue to enforce copyright laws*. Feb. 2001. ContactPakistan.com. 14 Feb. 2003. <http://www.contactpakistan.com/news/news148.htm>

Creative Commons. *Choose a License*. 2003. Creative Commons. 12 Feb. 2003. <http://creativecommons.org/license/>.

Creative Commons, *Common Content*. 13 May 2004. <http://commoncontent.org/>

Davidson, Paul. *Patents out of control?* 13 Jan. 2004. USATODAY.com. 3 Oct. 2004. <http://www.usatoday.com/money/companies/regulation/2004-01-13-patentscover_x.htm>

Daily Show with Jon Stewart. *America (The Book)*. New York: Warner. 2004.

Deleuze, Gilles and Felix Guattari. *A Thousand Plateaus*. Brian Massumi trans. Minneapolis: University of Minnesota Press. 1987.

DeLong, James V. "Defending Intellectual Property," in *Copy Fights: the Future of Intellectual Property in the Information Age*, Adam Thierer and Clyde Wayne Crews Jr. eds. Washinton D.C.: Cato Institute. 2002. Available at: <http://www.cei.org/gencon/027,02368.cfm>

Desai, Meghnad. *Marx's Revenge: The Resurgence of Capitalism and the Death of Statist Socialism*. New York: Verso. 2002.

Dewey, John. *Experience and Nature*. New York: Dover. 1958.

Deutscher Bundestag. *Copyright Law (Urheberrechtsgesetz)*. 1999. WIPO International Bureau trans. Lawrence Schäfer and Gerhard Dannemann eds. IUSCOMP, The Comparative Law Society. 12 Feb. 2003. <http://www.iuscomp.org/gla/statutes/UrhG.htm>.

DVD CCA. *DVD CCA – CSS*. DVD CCA. 3 Oct. 2004. <http://www.dvdcca.org/css/>

DVD CCA. *DVD CCA Welcomes You!* DVD CCA. 3 Oct. 2004. <http://www.dvdcca.org/>

Dworkin, Ronald. "Rights as Trumps," in *Theories of Rights*, Jeremy Waldron, ed. Oxford: Oxford University Press. 1984.

Edge Foundation. *Personal Fabrication: A Talk with Neil Gershenfeld*. 23 Sept. 2003. Edge.org. 4 Oct. 2005. <http://www.edge.org/3rd_culture/gershenfeld03/gershenfeld_index.html>

Eisner, Michael. *Address Before Members of the United States Congress*. 7 June 2000. MPAA.org. 9 Apr. 2005. <http://mpaa.org/copyright/MEisner.htm>

The European Parliament and the Council of the European Union. *EUCD Directive 2001/29/EC*. 2001. The European Union Online. 12 Feb. 2003. <http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&numdoc=32001L0029&lg=EN>.

Evers, Joris. *EC allows music downloading in antipiracy proposal*. 2003. IDG News Service, ITworld.com. 12 Feb. 2003. <http://www.itworld.com/Net/4087/030131euantipiracy/>.

Federal Convention of 1787. *The Constitution of the United States of America*. 1993. Peter Martin ed. Cornell Law School. 12 Feb. 2003. <http://www.law.cornell.edu/constitution/constitution.overview.html>

Felten, Edward W. "Reading Between the Lines: Lessons from the SDMI Challenge." Email sent to sdmi-paper-info@CS.Princeton.EDU, Apr. 2001. Archived on Cryptome.org. 14 Feb. 2003 <http://cryptome.org/sdmi-attack.htm>

Fisher, William W., III. *Promises to Keep: Technology, Law, and the Future of Entertainment*. Stanford University Press. 2004. Excerpts available online at: <http://www.tfisher.org/PTK.htm>

Foucault, Michel. *Power/Knowledge: Selected Interviews & Other Writings 1972-1977*. Colin Gordon, ed. New York: Pantheon Books. 1980.

Free Software Foundation. *GNU General Public License*. 2001. GNU/FSF. 12 Feb. 2003. <http://www.gnu.org/copyleft/gpl.html>.

Free Software Foundation. *Selling Free Software*. 2002. GNU/FSF. 12 Feb. 2003. <http://www.gnu.org/philosophy/selling.html>.

Free Software Foundation. *What is Copyleft?* 2002. GNU/FSF. 12 Feb. 2003. <http://www.gnu.org/copyleft/copyleft.html#TOCWhatIsCopyleft>.

Garaudy, Roger. *The Crisis in Communism: The Turning-Point of Socialism*. Ross, Peter and Betty trans. New York: Grove Press. 1970

Ginsburg, Justice Ruth Bader, Supreme Court of the United States. *Eldred v. Ashcroft, (537 01-618), Majority Opinion*. Jan. 2003. Legal Information Institute, Law

School, Cornell University. 14 Feb. 2003. <http://supct.law.cornell.edu/supct/html/01-618.ZO.html>

Gold, Michael. *The CD Sales Slump: Not Simply because of mp3*. 2003. SRI Consulting Business Intelligence. 12 Feb. 2003. <http://www.sric-bi.com/DF/news/2002-07-16.shtml>

Goodin, Robert E. *Utilitarianism as a Public Philosophy*. Cambridge: Cambridge University Press. 1995.

Guyer, Paul. *Groundwork to the Metaphysics of Morals*. Paul Guyer, ed. Oxford: Rowman & Littlefield. 1998.

Guyer, Paul. "Kant's Deductions of the Principles of Right," in *Kant's Metaphysics of Morals: Interpretive Essays*, Mark Timmons, ed. Oxford: Oxford University Press. 2002.

Herman, Barbara. "Mutual Aid and Respect for Persons," in *Groundwork to the Metaphysics of Morals*. Paul Guyer, ed. Oxford: Rowman & Littlefield. 1998.

Hester, D. Micah and Paul J. Ford, eds. *Computers and Ethics in the Cyberage*. Upper Saddle River, New Jersey: Prentice-Hall. 2001.

Hetcher, Steven. *Norms in a Wired World*. Cambridge: Cambridge University Press. 2004.

Hill, Thomas E., Jr. *Respect, Pluralism, and Justice: Kantian Perspectives*. Oxford: Oxford University Press. 2000.

Hobbes, Thomas. *Leviathan*. eBooks@Adelade. 2004. <http://etext.library.adelaide.edu.au/h/h68l/>

Hooghe, Liesbet and Gary Marks. "Unraveling the Central State, but How? Types of Multi-Level Governance." *American Political Science Review*, 97:233-43. American Political Science Association. 2003.

Hughes, Charles Evans. *Fox Film Corp. v. Doyal*, 286 U.S. 123 (1932). Majority opinion. Available at: <http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=search&court=US&case=/us/286/123.html>

Husserl, Edmund. *Ideas: General Introduction to Pure Phenomenology*, W. R. Boyce Gibson trans. New York: Macmillan. 1931.

Ian, Janis. *The Internet Debacle – An Alternate View*. JanisIan.com. 18 Feb. 2005. <http://www.janisian.com/article-internet_debacle.html>

Illich, Ivan. *Tools for Conviviality*. New York: Harper & Row. 1973.

Irwin, Steve. *Frequently Asked Questions – BioForge*. BIOS.net. 18 Feb. 2005. <http://www.bios.net/daisy/bios/67>

Jackson, Joab. *Justifying the Means*. Apr. 2001. Baltimore City Paper Online. 14 Feb. 2003. <http://www.citypaper.com/2001-04-11/cyber.html>

Jefferson, Thomas. *Thomas Jefferson To Isaac McPherson, Monticello, August 13th, 1813*. 2001. Temple University James E. Beasley School of Law. 12 Feb. 2003. <http://www.temple.edu/lawschool/dpost/mcphersonletter.html>

Johnson, Deborah G. *Computer Ethics*. Third edition. Upper Saddle River, New Jersey: Prentice-Hall. 2001.

Kant, Immanuel. *Critique of Pure Reason*, Norman Kemp Smith, trans. New York: St. Martin's Press. 1965.

Kant, Immanuel. "Groundwork of the Metaphysics of Morals," in *Practical Philosophy*. Cambridge Edition of the Works of Immanuel Kant, Mary J. Gregor trans. Cambridge: Cambridge University Press. 1996.

Kant, Immanuel. "The Metaphysics of Morals," in *Practical Philosophy*. Cambridge Edition of the Works of Immanuel Kant, Mary J. Gregor trans. Cambridge: Cambridge University Press. 1996.

Kant, Immanuel. "On the Wrongfulness of Unauthorized Publication of Books," in *Practical Philosophy*. Cambridge Edition of the Works of Immanuel Kant, Mary J. Gregor trans. Cambridge: Cambridge University Press. 1996.

Kant, Immanuel. *Von der Unrechtmäßigkeit des Büchernachdrucks*. Bibliothek der Universität Bielefeld. 12 Feb. 2003. <http://www.ub.uni-bielefeld.de/cgi-bin/bmbutton.cgi?pfad=/diglib/berlmon/012851/&seite=00000430.gif&jump=1&jump=5&jump=10>.

Korsgaard, Christine M. "Kant on the Right to Revolution," in *Reclaiming the History of Ethics: Essays for John Rawls*, Andrews Reath, Barbara Herman, and Christine M. Korsgaard, eds. Cambridge: Cambridge University Press. 1997.

William Landes, Richard Posner. *The Economic Structure of Intellectual Property Law*. 2003.

Latour, Bruno. *Where are the Missing Masses? Sociology of a Door*. 1992. Site Web de Bruno Latour. 28 Feb. 2006. <http://www.ensmp.fr/~latour/articles/article/050.html>

Lebihan, Rachel. *Australian Police chastised for Warez raids*. Dec. 2001. ZDNet Australia. 14 Feb. 2003. <http://www.zdnet.com.au/newstech/security/story/0,2000024985,20262446,00.htm>

Leibniz, Gottfried Wilhelm. *The Monadology*. Richard Latta trans. eserver.org. 2 Oct. 2004. <http://eserver.org/philosophy/leibniz-monadology.txt>

Lessig, Lawrence. *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*. New York: Penguin Press. 2004.

Locke, John. *Two Treatises of Government*. Project Gutenberg edition. Available at: <http://textual.net/access.gutenberg/John.Locke>

Love, Courtney. *Courtney Love Does the Math*. Jun. 14 2000. Salon.com. Mar. 9 2004. <http://dir.salon.com/tech/feature/2000/06/14/love/index.html?pn=1>

Madison, James. "Federalist Paper No. 10," in *The Federalist Papers*, Alexander Hamilton, James Madison, and John Jay. New York: Bantam Press. 1982.

Manjoo, Farhad. *Were DrinkOrDie Raids Overkill?* Dec. 2001. Wired News. 14 Feb. 2003. <http://www.wired.com/news/technology/0,1282,49096,00.html>

Mantell, Katie. *Patents 'could hinder poverty reduction'*. 12 Sept. 2002. Science and Development Network. 23 July 2006. < http://www.scidev.net/News/index.cfm?fuseaction=readnews&itemid=141&language=1>

Marcuse, Herbert. *One Dimensional Man.* Boston: Beacon Press.1964. Available online at: <http://www.marxists.org/reference/archive/marcuse/works/one-dimensional-man/>

Marx, Karl. *Capital, v.I*. Ben Fowkes trans. New York: Random House. 1977.

Marx, Karl. *Capital, v.III*. Ernest Untermann trans. Chicago: Charles H. Kerr & Co. 1909.

Marx, Karl. *The Critique of the Gotha Program*. From *Marx/Engels Selected Works, vol. III, pgs. 13 -30* (Moscow: Progress Publishers. 1970.) Marxists.org. HTML version, Brian Basgen. 1999. <http://www.marxists.org/archive/marx/works/1875/gotha/index.htm>

Marx, Karl. *Economic and Philosophic Manuscripts of 1844*. Martin Mulligan trans. 2 Oct. 2004. <http://www.marxists.org/archive/marx/works/1844/manuscripts/preface.htm>

Marx, Karl. *The German Ideology*. 2 Oct. 2004. <http://www.marxists.org/archive/marx/works/1845/german-ideology/index.htm>

Marx, Karl. *Grundrisse der Kritik der politischen Ökonomie*. Martin Liclaus trans. 1997. 15 Apr. 2004. <http://www.marxists.org/archive/marx/works/1857/grundrisse/index.htm>

Marx, Karl and Friedrick Engels. *The Communist Manifesto*. Samuel H. Beer, ed. New York: Appleton-Century-Crofts. 1955.

Mayor, Adrienne. *Greek Fire, Poison Arrows, & Scorpion Bombs: Biological and Chemical Warfare in the Ancient World*. Woodstock: Overlook. 2003.

McCullagh, Declan. *ISP appeals RIAA song-swapper subpoena*. Jan. 2003. c|net News.com. 14 Feb. 2003. <http://news.zdnet.co.uk/story/0,,t269-s2129666,00.html>

michael@slashdot.org. *Disney Wins, Eldred (and everyone else) Loses*. Jan. 2003. Posted to Slashdot.org. 14 Feb. 2003. <http://yro.slashdot.org/yro/03/01/15/1528253.shtml?tid=123>

Microsoft. *Anti-piracy stakeholders join hands*. Jul. 2002. Microsoft Press: South Africa. 14 Feb. 2003. <http://www.microsoft.com/southafrica/press/press-624.htm>

Microsoft. *Microsoft Office Word 2003: How to Buy*. 20 Oct. 2003. Microsoft.com. 8 Mar. 2004. <http://www.microsoft.com/office/word/howtobuy/default.mspx>

Mikkelson, Barbara and David P. *Happy Birthday We'll Sue*. Aug. 2002. Snopes.com. 14 Feb. 2003. <http://www.snopes.com/music/songs/birthday.htm>

Mill, John Stuart. *On Liberty*. 1859. Utilitarianism.com. 10 Apr. 2005. <http://www.utilitarianism.com/ol/one.html>

Miltrano, Tracy. " IMPORTANT INFORMATION ABOUT USING THE CORNELL NETWORK TO FILE-SHARE AND DOWNLOAD MUSIC, GAMES AND VIDEOS: THE RECREATIONAL DOWNLOADING OF COPYRIGHTED MATERIALS IS A VIOLATION OF FEDERAL LAW AND UNIVERSITY POLICY." Email 2002, exact date unknown. Archived at Kuro5hin.org. 14 Feb. 2003. <http://www.kuro5hin.org/story/2002/8/31/14253/3495>

MIT OpenCourseWare. *OCW Home*. 1 Oct. 2005. <http://ocw.mit.edu/index.html>

Motion Picture Association of America, Inc. *Re: Illegal Provision of DeCSS/Circumvention Device*. Letter to Cryptome, John Young. 4 Feb. 2000. Archived at <http://cryptome.org/dvd-mpaa-ccd.htm>

Motion Picture Association Worldwide Anti-Piracy. *Re: Unauthorized Distribution of Copyrighted Motion Pictures*. Letter to dst@cs.cmu.edu. 5 Feb. 2001. Archived at <http://www-2.cs.cmu.edu/~dst/DeCSS/Gallery/mpaa-threat-feb2001.txt>

Motion Picture Association of America. *STUDY SHOWS COPYRIGHT INDUSTRIES AS LARGEST CONTRIBUTOR TO THE U.S. ECONOMY*. 22 April 2002. MPAA.org. 9 April 2005. <http://mpaa.org/copyright/2002_04_22.htm>

Motion Picture Association of America. *MPA | Anti-piracy*. MPAA.org. 9 April 2005. <http://mpaa.org/anti-piracy/index.htm>

Nadel Mark S. *Questioning the Economic Justification for (and thus Constitutionality of) Copyright Law's Prohibition Against Unauthorized Copying: §106*. 2003. AEI-Brookings Joint Center for Regulatory Studies, 12 Feb. 2003. <http://www.aei.brookings.org/admin/authorpdfs/page.php?id=237>, or by direct link at <http://www.aei.brookings.org/admin/pdffiles/Nadel.pdf>.

Nasri, William. *The Crisis in Copyright*. New York: Marcel Dekker, Inc. 1976.

Netanel, Neil W. "Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing," *Harvard Journal of Law & Technology*, vol. 17, Dec. 2003. Available online at: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=468180>.

Negroponte, Nicholas. *Being Digital*. Alfred A. Knopf: New York. 1995.

Nissenbaum, Helen. "Should I Copy My Neighbor's Software," in *Computers, Ethics, and Social Values*. D.J. Johnson and H. Nissenbaum eds. Upper Saddle River: Prentice Hall. 1995.

O'Connor, Sandra Day. *Feist Publications, Inc. v. Rural Telephone Service Co*. 499 U.S. 340 (1991), Majority opinion. Available at: <http://www.law.cornell.edu/copyright/cases/499_US_340.htm>

O'Neill, Onora. *Constructions of Reason: Explorations of Kant's Practical Philosophy*. Cambridge: Cambridge University Press. 1989.

Open Source Initiative. *The BSD License* 2003. Opensource.org. 12 Feb. 2003. <http://www.opensource.org/licenses/bsd-license.php>.

Parliament of England. *The Statute of Anne*. Karl-Erik Tallmo ed. The History of Copyright. 12 Feb. 2003. <http://www.copyrighthistory.com/anne.html>.

Perelman, Michael. *Class Warfare in the Information Age*. New York: St. Martin's Press. 1998.

Perelman, Michael. *Information, Social Relations and the Economics of High Technology*. New York: St. Martin's. 1991.

Perelman, Michael. *Steal this Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity*. New York: Palgrave. 2002.

Pew Charitable Trusts. *Grantee Publications: The Music Downloading Deluge*. Apr. 2001. Pewtrusts.com. 5 Oct. 2005. <http://www.pewtrusts.com/pubs/pubs_item.cfm?content_item_id=409&content_type_id=8&page=p1>

Pew Internet & American Life Project. *78% of Those Who Download Music Online Don't Think They Are Stealing*. 29 Sept. 2000. Grantee Press Releases, Pewtrusts.com. 20 Feb. 2006. <http://www.pewtrusts.com/ideas/ideas_item.cfm?content_item_id=95&content_type_id=7>

PC Game News. *Microsoft Raids Game Developer Offices*. Jun. 2002. PC Gameworld.com. 14 Feb. 2003. <http://www.pcgameworld.com/story.php/id/238/>

Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, United States Senate, One Hundred Eighth Congress. *Privacy and Piracy: the Paradox of Illegal File Sharing on Peer-to-Peer Networks and the Impact of Technology on the Entertainment Industry*. September 30, 2003. U.S. Government Printing Office: Washington. 2004.

Rensselaer Polytechnic Institute. "Rapid Prototyping at RPI: 3-D Printing." rpi.edu. 29 Sept. 2004. <http://www.rpi.edu/dept/aml/public_html/rp/rp.html>

Rodgers, Andrew. *'Phantom Edit' Deletes Jar Jar Binks*. Jun. 2001. Zap2it.com. 29 Sept. 2004. <http://www.zap2it.com/movies/news/story/0,1259,---6903,00.html>

Rothken, Ira P. *Are You a Software Pirate?* 1998. Rothken Law Firm, used with permission from Scholastic, Inc. 14 Feb. 2003. <http://www.techfirm.com/newpage7.htm>

Smith, Russell. *Open Dynamics Engine – ODE*. SourceForge. 24 Mar 2004. <http://q12.org/ode/>

Spinello, Richard A. *CyberEthics: Morality and Law in Cyberspace*. Boston: Jones and Bartlett. 2000.

Spinello, Richard A. and Herman T. Tavani, eds. *Readings in CyberEthics*. 2nd edition. Boston: Jones and Bartlett. 2004.

Stallman, Richard. *Why Software Should be Free*. The Free Software Foundation. 21 May 2004. <http://www.gnu.org/philosophy/shouldbefree.html> 1 Oct. 2004.

Stallman, Richard. *Why Software Should Not Have Owners*. The GNU Project and the Free Software Foundation. 22 Mar. 2004. <http://www.gnu.org/philosophy/why-free.html>

Sterba, James. *Justice for Here and Now*. Cambridge: Cambridge University Press. 1998.

Stevenson, Frank. *http://www-2.cs.cmu.edu/~dst/DeCSS/FrankStevenson/shortest-anonymous-code.txt*. DeCSS Gallery. 3 Oct. 2004. <http://www-2.cs.cmu.edu/~dst/DeCSS/FrankStevenson/shortest-anonymous-code.txt>

Ströker, Elisabeth. *The Husserlian Foundations of Science*, Lee Hardy ed. Lanham: The Center for Advanced Research in Phenomenology and University Press of America. 1987.

Ströker, Elisabeth. *Husserl's Transcendental Phenomenology*, Lee Hardy trans. Stanford: Stanford University Press. 1993.

Subcommittee on Courts, Civil Liberties and the Administration of Justice of the Committee on the Judiciary, House of Representatives, Ninety-Seventh Congress. Home Recording of Copyrighted Works. Washington D.C.: U.S. Government Printing Office. 1983. Available at: <http://cryptome.org/hrcw-hear.htm>

Swinyard, W.R., H. Rinne and A. Keng Kau. "The Morality of Software Piracy: A Cross-Cultural Analysis," in *Computers and Ethics in the Cyberage*. D. Micah Hester and Paul J. Ford, eds. Upper Saddle River, New Jersey: Prentice-Hall. 2001.

Think Tank with Ben Wattenberg. *Henry Kissinger at Large, Part Two*. 5 Feb. 2004. PBS.org. 2 Oct. 2004. <http://www.pbs.org/thinktank/transcript1139.html>

Tsang, Susan. *Singapore raids net pirated Windows XP*. Nov. 2001. ZDNet U.K., archived from ZDNet Asia. 14 Feb. 2003. <http://news.zdnet.co.uk/story/0,,t269-s2098919,00.html>

United States Court of Appeals, Ninth Circuit. *A&M Records v. Napster, No.00-16401, D.C. No. CV-99-05183-MHP*. 2001. Berkman Center for Internet and Society at Harvard Law School. 12 Feb. 2003. <http://eon.law.harvard.edu/~wseltzer/010212-napster.pdf>.

United States Department of Justice. *The No Electronic Theft ("NET") Act: Relevant portions of 17 U.S.C. and 18 U.S.C. as amended (redlined).* 1998. United States Department of Justice, Computer Crime and Intellectual Property Section (CCIPS). 12 Feb. 2003. <http://www.usdoj.gov/criminal/cybercrime/17-18red.htm>.

Vaidhyanathan, Siva. *Copyrights and Copywrongs: The Rise of Intellectual Property and How It Threatens Creativity.* New York: New York University Press. 2003.

Virilio, Paul. *Ground Zero*. Chris Turner trans. New York: Verso. 2002.

Vogt, Tom. *DeCSS Central – Disclaimer*. DeCSS Central. 3 Oct. 2004. <http://www.lemuria.org/DeCSS/disclaimer.html>

Weckert, John and Douglas Adeney. *Computer and Information Ethics*. Westport, Connecticut: Greenwood Press. 1997.

Westphal, Kenneth. "A Kantian Justification of Possession," in *Kant's Metaphysics of Morals: Interpretive Essays*, Mark Timmons, ed. Oxford: Oxford University Press. 2002.

WIPO. *WIPO Intellectual Property Handbook: Policy, Law and Use (WIPO Publication No.489 (E))*. 2004. WIPO. 23 July 2006. Available at: <http://www.wipo.int/about-ip/en/iprm/pdf/ch1.pdf>

Wood, Allen W. *Kant's Ethical Thought*. Cambridge: Cambridge University Press. 1999.

LICENSE

Attribution-NonCommercial-ShareAlike 1.0

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS DRAFT LICENSE DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE INFORMATION PROVIDED, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM ITS USE.

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

a. **"Collective Work"** means a work, such as a periodical issue, anthology or encyclopedia, in which the Work in its entirety in unmodified form, along with a number of other contributions, constituting separate and independent works in themselves, are assembled into a collective whole. A work that constitutes a Collective Work will not be considered a Derivative Work (as defined below) for the purposes of this License.
b. **"Derivative Work"** means a work based upon the Work or upon the Work and other pre-existing works, such as a translation, musical arrangement,

dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which the Work may be recast, transformed, or adapted, except that a work that constitutes a Collective Work will not be considered a Derivative Work for the purpose of this License.

c. **"Licensor"** means the individual or entity that offers the Work under the terms of this License.
d. **"Original Author"** means the individual or entity who created the Work.
e. **"Work"** means the copyrightable work of authorship offered under the terms of this License.
d. **"You"** means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.

2. Fair Use Rights. Nothing in this license is intended to reduce, limit, or restrict any rights arising from fair use, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

a. to reproduce the Work, to incorporate the Work into one or more Collective Works, and to reproduce the Work as incorporated in the Collective Works;
b. to create and reproduce Derivative Works;
c. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission the Work including as incorporated in Collective Works;
d. to distribute copies or phonorecords of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission Derivative Works;

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. All rights not expressly granted by Licensor are hereby reserved.

4. Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

a. You may distribute, publicly display, publicly perform, or publicly digitally perform the Work only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy or phonorecord of the Work You distribute, publicly display, publicly perform, or publicly digitally perform. You may not offer or impose any terms on the Work that alter or restrict the terms of this License or the recipients' exercise of the

rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute, publicly display, publicly perform, or publicly digitally perform the Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License Agreement. The above applies to the Work as incorporated in a Collective Work, but this does not require the Collective Work apart from the Work itself to be made subject to the terms of this License. If You create a Collective Work, upon notice from any Licensor You must, to the extent practicable, remove from the Collective Work any reference to such Licensor or the Original Author, as requested. If You create a Derivative Work, upon notice from any Licensor You must, to the extent practicable, remove from the Derivative Work any reference to such Licensor or the Original Author, as requested.

b. You may distribute, publicly display, publicly perform, or publicly digitally perform a Derivative Work only under the terms of this License, and You must include a copy of, or the Uniform Resource Identifier for, this License with every copy or phonorecord of each Derivative Work You distribute, publicly display, publicly perform, or publicly digitally perform. You may not offer or impose any terms on the Derivative Works that alter or restrict the terms of this License or the recipients' exercise of the rights granted hereunder, and You must keep intact all notices that refer to this License and to the disclaimer of warranties. You may not distribute, publicly display, publicly perform, or publicly digitally perform the Derivative Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License Agreement. The above applies to the Derivative Work as incorporated in a Collective Work, but this does not require the Collective Work apart from the Derivative Work itself to be made subject to the terms of this License.

c. You may not exercise any of the rights granted to You in Section 3 above in any manner that is primarily intended for or directed toward commercial advantage or private monetary compensation. The exchange of the Work for other copyrighted works by means of digital file-sharing or otherwise shall not be considered to be intended for or directed toward commercial advantage or private monetary compensation, provided there is no payment of any monetary compensation in connection with the exchange of copyrighted works.

d. If you distribute, publicly display, publicly perform, or publicly digitally perform the Work or any Derivative Works or Collective Works, You must keep intact all copyright notices for the Work and give the Original Author credit reasonable to the medium or means You are utilizing by conveying the name (or pseudonym if applicable) of the Original Author if supplied; the title of the Work if supplied; in the case of a Derivative Work, a credit identifying the use of the Work in the Derivative Work (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). Such credit may be implemented in any reasonable manner; provided, however, that in the case of a Derivative Work or Collective Work, at a minimum such credit will appear where any other comparable authorship

credit appears and in a manner at least as prominent as such other comparable authorship credit.

5. Representations, Warranties and Disclaimer

a. By offering the Work for public release under this License, Licensor represents and warrants that, to the best of Licensor's knowledge after reasonable inquiry:
    i. Licensor has secured all rights in the Work necessary to grant the license rights hereunder and to permit the lawful exercise of the rights granted hereunder without You having any obligation to pay any royalties, compulsory license fees, residuals or any other payments;
    ii. The Work does not infringe the copyright, trademark, publicity rights, common law rights or any other right of any third party or constitute defamation, invasion of privacy or other tortious injury to any third party.
b. EXCEPT AS EXPRESSLY STATED IN THIS LICENSE OR OTHERWISE AGREED IN WRITING OR REQUIRED BY APPLICABLE LAW, THE WORK IS LICENSED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES REGARDING THE CONTENTS OR ACCURACY OF THE WORK.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, AND EXCEPT FOR DAMAGES ARISING FROM LIABILITY TO A THIRD PARTY RESULTING FROM BREACH OF THE WARRANTIES IN SECTION 5, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

a. This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Derivative Works or Collective Works from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.
b. Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

8. Miscellaneous

a. Each time You distribute or publicly digitally perform the Work or a Collective Work, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.
b. Each time You distribute or publicly digitally perform a Derivative Work, Licensor offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License.
c. If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.
d. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.
e. This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensor and You.

Creative Commons is not a party to this License, and makes no warranty whatsoever in connection with the Work. Creative Commons will not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. Notwithstanding the foregoing two (2) sentences, if Creative Commons has expressly identified itself as the Licensor hereunder, it shall have all rights and obligations of Licensor.

Except for the limited purpose of indicating to the public that the Work is licensed under the CCPL, neither party will use the trademark "Creative Commons" or any related trademark or logo of Creative Commons without the prior written consent of Creative Commons. Any permitted use will be in compliance with Creative Commons' then-current trademark usage guidelines, as may be published on its website or otherwise made available upon request from time to time.

Creative Commons may be contacted at http://creativecommons.org/