

Copyright
by
Brett Robert Caraway

2011

The Dissertation Committee for Brett Robert Caraway Certifies that this is the approved version of the following dissertation:

**Resistance Commons: File-Sharing Litigation and the Social System of
Commoning**

Committee:

Sharon L. Stover, Supervisor

Laura L. Stein, Co-Supervisor

Harry M. Cleaver Jr.

Madhavi Mallapragada

David J. Phillips

**Resistance Commons: File-Sharing Litigation and the Social System of
Commoning**

by

Brett Robert Caraway, B.A., M.A.

Dissertation

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2011

Acknowledgements

I would like to acknowledge a number of individuals who provided me with assistance in one form or another over the years. First are the members of my dissertation committee, each of whom made unique contributions to this effort. Many thanks go to Sharon Stover for her astute guidance, dedication, and support. I could not have asked for a better adviser. Many thanks also go to Laura Stein for her scholarly rigor and high expectations. I never received a free pass from her and my work is stronger because of it. I am very grateful as well for the personal and intellectual support of David Phillips. I was fortunate to have the opportunity to work with David both in teaching and as a student. Much of what I learned in those experiences is contained in these pages. Thanks also go to Madhavi Mallapragada for bringing fresh and vital perspective to this research. Her insight has proved very useful as I attempt to move beyond the dissertation with this research topic. And finally, I am especially indebted to Harry Cleaver. Harry worked with me, one on one, day after day, year after year, to help me develop a theoretical approach which will likely sustain me for the entirety of my academic career. His persistence and patience with me as I struggled to understand the literature is commendable to say the least. More importantly, Harry instilled in me the weight of my obligation to work for the common good of all—without once ever saying as much.

In addition to my dissertation committee I would like to recognize the contributions of friends and family. Many thanks go to my parents whose consistent emotional and financial support allowed me the luxury of pursuing an advanced degree in the first place. I would also like to thank Joe Straubhaar for rescuing my dissertation defense and for providing thoughtful commentary and perspective in the process. My

appreciation goes to Nikki Willis for being a great friend and teaching me how to survive grad school with my sanity intact. I am also truly grateful for the unconditional support and love shown me by my comrade Jessica Tyler who serves as a constant source of inspiration. I would also like to thank Shaun Reed for putting me on this path long, long ago. And finally, I am forever beholden to my wife and friend Jessica. She is my greatest advocate and fiercest defender.

Resistance Commons: File-Sharing Litigation and the Social System of Commoning

Brett Robert Caraway, Ph.D.

The University of Texas at Austin, 2011

Supervisor: Sharon L. Strover

Co-Supervisor: Laura L. Stein

Abstract: This dissertation is an investigation into the practice of peer-to-peer file-sharing and the litigation campaign targeting individual file-sharers carried out by the Recording Industry Association of America (RIAA) from 2003 to 2008. The competing conceptualizations of social relations which motivate the conflict over peer-to-peer file-sharing are explored using a combination of Autonomist Marxist theory and structuration theory. Peer-to-peer file-sharing is framed as part of the social system of commoning stemming from the recent ascendancy of immaterial labor within that sector of the economy dedicated to the production and distribution of informational and cultural goods. The RIAA litigation campaign is framed as a reaction to the emergence of new forms of social relations which are seen by the content-producing industries as subversive of revenue streams premised on commodity exchange in informational and cultural goods. The history of the RIAA litigation campaign is presented in detail with careful attention given to those instances in which defendants and other interested parties fought back against RIAA legal actions. The acts of resistance within the legal arena affected the ultimate potential of the litigation campaign to control the spread of file-sharing activities. Subsequent legal campaigns which have been based on the RIAA litigation

model are also examined. These later file-sharing cases have been met with similar forms of resistance which have likewise mitigated the impact of legal efforts to combat file-sharing. In addition, a survey of file-sharers is included in this research as part of an attempt to understand the relationship between legal actions targeting peer-to-peer systems and individual file-sharers and the technological and social development of peer-to-peer systems. This research argues that file-sharing litigation has proven ineffective in turning back the flood of file-sharing and may have increased the technological sophistication and community ties among file-sharers. In the end, the conflict over peer-to-peer file-sharing is cast as a manifestation of a larger dynamic of capitalist crisis as content-producing industries attempt to come to terms with the contradictory tendencies of immaterial labor and the production of common pools of digital resources.

Table of Contents

List of Tables	xii
Chapter 1 Introduction	1
Overview	1
Topic, Significance, and Purpose	2
General Question and Framework	5
Outline	7
Chapter 2 Review of the Literature	9
Political Economy	10
Autonomist Marxism	23
Structuration Theory	26
Power	29
Resistance	33
The Working Class	44
The State	50
Technology	55
Peer-To-Peer Systems	64
Social Relations	67
The Social System of Commodification	70
Information Enclosure Debate	72
Debate over a Public Right to Information	86
The Social System of Commoning	105
Theoretical Framework	117
Chapter 3 Review of the Literature	120
Research Question	120
Overall Approach and Rationale	121
Previous Application of Structuration Theory to Copyright Law	122
Structural Dimensions of Social Systems	124

Subsidiary Research Questions.....	131
Social Systems	131
Signification.....	132
Domination	132
Legitimation.....	132
Site and Population Selection	133
Data Gathering and Analysis	135
Survey Research.....	135
Possible Survey Questions for File-Sharers.....	136
Analysis of File-Sharing Litigation	138
Limitations	140
Ethical Considerations	140
Conclusion	141
Chapter 4 Histories of Commodification and Commoning in the Production and	
Distribution of Music.....	142
Economics of Mass Media.....	144
Economics of Peer-To-Peer Systems.....	150
Conflicting Rationales	156
The U.S. Music Industry.....	158
Origins of the U.S. Music Industry.....	159
Economics of the Music Industry	167
Copyright and the Music Industry	168
New Threats to the Music Industry.....	173
Internet Communication Models	175
Peer-based Model.....	177
Client/Server Model.....	179
Revival of Peer-To-Peer	182
Contemporary Peer-To-Peer Systems.....	184
Copyright and Peer-To-Peer Systems.....	186
Napster	192

General Operation of Napster	193
Legal Challenges.....	194
Gnutella.....	198
General Operation of Gnutella Implementation	200
FastTrack.....	205
General Operation of FastTrack Implementation	206
Legal Challenges.....	208
Litigating Against Individual Users.....	211
Chapter 5 The RIAA Copyright Litigation Campaign Targeting Individual File-Sharers.....	216
Prologue: The Suppression of the Radical Potential of Peer-To-Peer Platforms	217
Act 1: DMCA Subpoenas	219
Act 2: John Doe Subpoenas	230
Act 3: Pre-Doe Settlement Offers	234
Act 4: The Accused.....	245
Making Available: The Right of Distribution in Copyright	247
Attorneys' Fees.....	248
Jammie Thomas-Rasset	252
Joel Tenenbaum	258
Dénouement.....	267
Conclusion	269
Chapter 6 File-Sharing Litigation Redux.....	273
BitTorrent.....	275
Renewed File-Sharing Litigation.....	283
Copyright Trolls.....	283
XXX Litigation.....	288
Legal Setbacks	291
Other Anti-Peer-To-Peer Efforts.....	292

Chapter 7 A Survey of File-Sharers.....	300
Social System of File-Sharing	302
Methodology	309
Respondents	311
Survey Results	317
Conclusion	366
Chapter 8 Conclusion.....	368
Appendix A Informants for Semi-Structured Interviews.....	395
Appendix B Case Law and Statutes.....	397
Appendix C Trial Table of Contents.....	400
Bibliography	403

List of Tables

Table 3.1:	Three Structural Dimensions of Social Systems.....	126
Table 3.2:	Structural Dimensions of Commodification and Commoning	127
Table 7.1:	Respondent Ages	311
Table 7.2:	Nationalities	313
Table 7.3:	Occupations.....	315
Table 7.4:	Experience File-Sharing.....	317
Table 7.5:	Reasons for Using Peer-To-Peer.....	317
Table 7.6:	When Do You Own Music?.....	323
Table 7.7:	What Does Ownership of Music Entail?	325
Table 7.8:	How Should Musicians Feel About File-Sharing?	333
Table 7.9:	What Has Been the Effect of File-Sharing Litigation?	359

Chapter 1 Introduction

OVERVIEW

Recent technological developments have destabilized the system of property on which many content-producing industries have long relied. Intellectual property, the essential ingredient for large-scale capital-intensive media production, is being undermined by new modes of informational and cultural production and distribution which are multiplying and thriving in networked environments. The barriers to entry which once kept competitive forces at bay are now being eroded by new technologies capable of radically reducing the marginal costs of production and distribution. No longer are the content-producing industries assured of rents issuing from vast storehouses of intellectual properties. Nor are they guaranteed the competitive advantage which high economic input costs allow. Yet the greatest threat to the content-producing industries may come not from a sudden onslaught of unbridled competition but from everyday people who are no longer satisfied to play the role of the mere consumer. The social practices of creativity and sharing which have taken root in networked environments frustrate the content-producing industries' ability to commodify the artifacts being circulated there. Moreover, as the content-producing industries come to view the emerging digital commons as a potential threat to existing business models, considerable resources are being mobilized in an effort to bring the commons back within the capitalist logic of accumulation. However, there is also a counter-mobilization of resources in defense of the commons. This conflict is likely to exert significant influence on the

trajectory of capitalist development in the sphere of informational and cultural production and distribution.

TOPIC, SIGNIFICANCE, AND PURPOSE

Between 2003 and 2008 somewhere around 30,000 to 40,000 people were targeted with civil suits by the world's four largest record companies (Universal Music Group, Sony Music Entertainment, EMI, and Warner Music Group). These companies, represented by their media trade organization the Recording Industry Association of America (RIAA), pursued a litigation campaign in which suits were filed against individuals in U.S. district courts alleging copyright infringement (Beckerman, 2009). Most of these cases ended with default judgments since the accused seldom mounted legal defenses. Default judgments often resulted in awards amounting to more than 1000 times the actual damages. In those cases where the accused attempted to negotiate settlements the amounts were often in excess of 2000 times the actual damages (Beckerman, 2008). The prospect of a costly and protracted legal defense and the potential for extremely high statutory damages deterred the vast majority of defendants from challenging their accusers in court. This makes it difficult to assess the cumulative guilt or innocence of the tens of thousands of individuals accused of copyright infringement while using peer-to-peer networks. Many of the underlying facts in these cases have gone unchallenged or are obscured from view. However, there are a small number of cases in which the defendants have decided to fight back. Moreover, the litigation has not stemmed the growth of file-sharing activities on the Internet. If anything, the litigation has increased the antagonism between the recording industry and

those who continue to develop and use peer-to-peer file-sharing systems. It is these instances of resistance to the recording industry's attempts to eradicate the file-sharing commons which are the focus of the current research project.

Though the RIAA is the public face of the litigation campaign, there are hundreds of affiliated record companies in the organization which have not been party to the proceedings (Beckerman, 2008). And while it is certainly in the best interests of the RIAA for individuals to either acquiesce or settle, beginning in 2005 a number of defendants challenged what many considered to be groundless lawsuits. First in New York, then in Seattle, then in Michigan—people accused of copyright infringement for sharing files of recorded music over peer-to-peer networks began seeking out legal representation (Baldas, 2005). In some cases it was argued that the plaintiffs could not tie an IP address to a specific individual user. In 2007 the first successful defense against the RIAA's so-called "driftnet" approach¹ occurred. What's more, the future of the litigation campaign itself was cast in doubt after the court awarded attorneys' fees to the defendant in the case, (Bangeman, 2007, February 7). A stream of other cases around the same time raised additional legal questions: (1) did simply making available copyrighted material over peer-to-peer networks constitute infringement if distribution was not proven (Bangeman, 2007, April 10)?; (2) were high statutory damages unconstitutional (Delahunty, 2006)?; and (3) what was the legality of the investigatory practices used by the RIAA (Fisher, 2007)? Then in the summer of 2009 individual defendants were dealt a series of setbacks. First, a federal jury ruled against Jammie Thomas-Rasset, a 32-year-

¹ This refers to the RIAA's practice of using the discovery phase of a case against the holder of an ISP account to discover the identity of the alleged copyright infringer, after which the original case is dropped and another case is filed with the named defendant.

old Minnesota mother of four, and awarded Capitol Records \$1.92 million in damages (Wilkowske, 2009). The following month another federal jury awarded Sony BMG Music \$675 thousand in its case against Boston University graduate student Joel Tenenbaum (Lavoie, 2009). However, in both cases the respective district court judges intervened and lowered the damages, prompting a continuation of both cases. These cases, along with a number of other successful challenges to the RIAA litigation campaign, serve as useful windows into the social tensions arising out of the process of commodifying informational and cultural goods.

The outcome of this conflict will affect not only copyright law but the means by which informational and cultural goods are produced and distributed in society. Until now, the significance of the practices of individual file-sharers has not received adequate analysis. Structural approaches start with the law as the primary unit of analysis and rarely venture substantially outside of the institutional forums in which law is practiced. Consequently, these approaches have done little to identify and explain the complex mesh of structures which enable and constrain the activities of human agents with competing interests in the sphere of informational and cultural production. Scholarship has not adequately addressed those structures which condition the practice of peer-to-peer file-sharing. Thus the politics of peer-to-peer file sharing is largely hidden from view. Through an investigation of the technological, legal, and social structures implicated in the conflict over file-sharing, I intend to map those connections among sites of individual experience and social organization which make possible the mobilization and coordination of resources as a part of that conflict. The nature of the research is both

exploratory and explanatory. I will attempt to shed light on the complex structures extending out from the lived experience of individual file-sharers as they confront the imposition of the commodity form in their daily lives. As the inquiry extends out from where these individuals are located, I will explain how structures function to both position the individual as well as open up new possibilities for social organization and resistance. I believe that a deeper understanding of the structural dimensions of the growing digital commons and the legal struggles occurring as part of the capitalist enclosure of information will make possible a more coordinated and coherent challenge to existing intellectual property regimes. Therefore, the current research project could be characterized as action research, as it is likely to be of value to those who are active in the struggle against the commodification of information in the networked environment (Marshall, 2006).

GENERAL QUESTION AND FRAMEWORK

What competing conceptualizations of social relations provoke conflicts over peer-to-peer file sharing?

It is my intention to avoid framing the analysis either in terms of reified structures of constraint on individual behavior (structuralist approach) on the one hand or in terms of subjective personal narratives without contextualization (instrumentalist approach) on the other. Much of the current literature on copyright law, whether from the political economy tradition, mainstream economics, or critical legal studies, is in the structuralist vein. These analyses seek to explain social organization as the product of a functional equilibrium or as the result of an inner logic of capitalism. The current project will

instead highlight the contingent nature of intellectual property regimes which are themselves the product of interactions among human agents with competing interests. Therefore, copyright law is conceptualized as a recursive process in which the law is both the means and the outcome of the conflict between copyright holders and those accused of copyright infringement. This takes the theoretical framework beyond the normative literature of political economy, economics, and law while incorporating alternative constructions of Marxian theory and sociology. A middle way is charted through the theoretical excesses of both structuralism and instrumentalism by first acknowledging individual human agency and then by recognizing that it can inform our understanding of structure. This project seeks to map the coordinates of the linkages between the local settings of human experience where people confront information commodities and the translocal organizations and administrations which affect human behavior through a complex field of control and enablement. Once we have a map of these linkages we can start to see how these structures function alongside each other, accounting for the persistence, transformation, and rupture of a social system based on the commodification of information. The conflict over intellectual property and peer-to-peer file-sharing illuminates the role of law as a contested space or as a resource for struggle between incongruous social systems.

As with more traditional notions of property, intellectual property and its subsets are not static legal categories. As man-made institutions they have developed over time and in relation to particular class interests. In commenting on property, the distinguished political scientist C.B. Macpherson (2008) observed:

How people see the thing—that is, what concept they have of it—is both effect and cause of what it is at any time. What they see must have some relation (though not necessarily an exact correspondence) to what is actually there; but changes in what is there are due partly to changes in the ideas people have of it. This is simply to say that property is both an institution and a concept and that over time the institution and the concept influence each other. (1)

In other words, the deployment of legal resources by the possessors of the exclusive rights which fall under the header of ‘copyright’ must be viewed as part of a larger social dynamic. The cases brought against individuals by copyright holders are both cause and effect of a class dynamic deriving from those property relations specific to the capitalist mode of production. That dynamic is struggle. Accordingly, the analysis of law should frame copyright as something more than a reification of the dominant class interests. As the battles over copyright in the networked information economy have demonstrated, intellectual property law has been shaped both by the realization of the limits to affecting individual behavior as well as the desire to afford as much protection as possible to the copyright holders.

OUTLINE

This dissertation will proceed according to the following outline. The second chapter further develops the theoretical framework employed as part of this study by exploring concepts such as power, resistance, class struggle, the state, technology, and social relations. In the third chapter I provide a brief overview of the current status of the copyright litigation campaign as well as an overview of the research project itself.

Chapter 4 examines the historical, economic, technical, and legal dimensions of both the music industry and peer-to-peer technologies. Chapter 5 recounts the history of the RIAA litigation campaign targeting individual file-sharers while arguing that the ultimate success of the campaign was effectively limited by numerous acts of resistance to the recording industry's legal actions. Chapter 6 examines the continuing legal actions directed at individual file-sharers as additional copyright groups have sought to apply the RIAA's model of litigation to other areas of content production and distribution. Chapter 7 explores the world of peer-to-peer file-sharing through survey research conducted with a sample of file sharers. In it I investigate the deepening antagonism between the industry and file-sharers while considering the impact of litigation on peer-to-peer systems.

Chapter 8 is a concluding chapter in which I revisit some of the major findings of this study with an eye to explaining the trajectory of capitalist development in the sphere of informational and cultural production and distribution as the product of a conflict over competing conceptualizations of social relations based on either commodification or commoning.

Chapter 2 Review of the Literature

There is not a significant body of literature which examines the phenomenon of peer-to-peer file-sharing from a critical perspective. This is due, at least in part, to the widespread adoption of theoretical frameworks which fail to recognize the ways in which the class² antagonism influences the trajectory of capitalist development. Much of the existing scholarship approaches the subject of peer-to-peer file-sharing as a momentary aberration produced by a quick and unanticipated succession of technological developments and which can be resolved by institutional adjustments. What's more, peer-to-peer file-sharing has passed under the radar of many critical theorists who are seemingly more interested in theorizing the capitalist side of the class relation. Conversely, this research project is guided by approaches to Marxism and sociology which set it apart from previous approaches. However, as this project proceeds largely from a Marxist perspective, it is necessary at the outset to confront the tendencies within the political economy tradition which have obscured the significance of peer-to-peer file-sharing. Although this discussion will only bear upon the subject of file-sharing in the abstract, it serves as a point of departure in the development of a more suitable theoretical framework capable of acknowledging the significance of the subject at hand. Therefore, I offer a critique of the political economy approach to the study of information which is followed by a survey of two alternative approaches: Autonomist Marxism and structuration theory. I explore the ways in which these two theoretical frames

² The use of *class* here differs from common usage where it connotes little more than a group of people with some shared characteristic(s). Instead, the current study employs class to indicate a social division occurring at the stage in which the development of a social surplus of production allows for the expropriation of one class by another.

complement each other and contribute to a better understanding of the production of information by answering some of the problems presented by the political economy tradition. I then compare and contrast this alternative framing to the treatments offered by other pertinent scholarship on a series of concepts which lie at the heart of the current investigation: power, resistance, the working class, the state, technology, and social relations. The relevant contributions of political economists, mainstream economists, and critical legal scholars are brought to bear on each of these concepts to demonstrate the applicability of the proposed theoretical framework to the subject of peer-to-peer file-sharing. While there is considerable overlap among these concepts, they are presented in this particular order in an attempt to construct a working theory of the social system of commoning which will serve as the basis for the current investigation.

POLITICAL ECONOMY

Political economists have weighed in from time to time on the debates over intellectual property and have tended to view copyright primarily as an instrument for the capitalist appropriation and control of culture. These analyses consist mainly of theories of class domination wherein law functions as an exclusive tool of the capitalist class. While it is true that copyright often serves as a resource for firms in their attempt to impose the commodity form, it is also true that there is considerable struggle occurring as a part of that process. Oftentimes the struggle over the proper role of copyright is within the capitalist class itself (intra-class conflict). For example, this was the case in the conflict between U.S. broadcasters and the nascent cable television industry during the 1970s. At other times, the struggle is between classes (interclass conflict) as was the case

when the RIAA sued individuals for alleged copyright infringement. In fact, it is often the case that the struggle over the proper role of copyright is characterized by simultaneous intraclass and interclass conflicts. In order to understand how and why political economists have come to focus their efforts above all on *intra-firm conflict*³ to the exclusion of interclass conflict some background on the history of the political economy tradition is required.

The political economy approach to the study of intellectual property is not as rich or well-developed as other areas of political economic analysis. This is due, at least in part, to the ambiguous position that information production has held among political economy scholars over the years. Two historical tendencies within the tradition are responsible for this stunted development. First, Marxism traditionally characterized the production of information as unproductive labor. Marxists emphasized the content of information and its role in the (re)production of the capitalist ideology. Eventually those political economists concerned with the increasing centrality of information production to the overall economy began to see it in a different light. Yet despite their recognition of the productive capacity of that section of the economy dedicated to the production of information, their efforts were stymied by a second problematic tendency. An overriding concern with media ownership and social domination blinded them to the existence and relevance of working class resistance to the contingent processes of information commodification. These historical developments within the political economy of communication tradition produced a theoretical predisposition ill-suited to the study of

³ *Intraclass conflict* and *interclass conflict* are terms used by Bettig (1996). In the interest of clarity I will substitute *intra-firm conflict* for the former.

phenomena like peer-to-peer file-sharing. So that we may come to theorize file-sharing as an act of resistance which conditions the trajectory of capitalist development in the sphere of information production, we must first contend with these shortcomings of the political economy of communication literature in greater detail.

As that portion of the economy dedicated to the production of information became ascendant in the late nineteenth century and early twentieth century, orthodox Marxist perspectives about what constituted productive and unproductive labor initially obstructed the analysis of the information commodity. Orthodox Marxists believed that the production of information did not contribute to the production of value for capital. For example, advertising was not considered productive labor and was instead considered a necessary activity for the circulation of commodities—the cost of which was deducted from surplus value. In fact, the two most influential American Marxist economists of the twentieth century, Baran and Sweezy (1968), viewed the labor involved in the production of information as little more than a parasite on the generation of surplus value.

Dallas Smythe, one of the founding figures of the political economy of communication, rejected this characterization of information production and instead focused on the economic function of these industries. Smythe (1977) remarked that, “The first question that historical materialists should ask about mass communications systems is what economic function for capital do they serve, attempting to understand their role in the reproduction of capitalist relations of production” (p. 1). Smythe’s answer was to turn the focus of political economy away from the information commodity itself and towards the production of audiences for sale to industrial capitalists. In essence, the media

artifacts which dissident Marxists like the Frankfurt School had theorized solely in terms of the reproduction of capitalist ideology were re-theorized primarily as inducements to attract unwitting audience members to view advertisements. And since audiences were now coerced into working as mind slaves (Smythe, 1978) the productivity question was answered by way of shifting attention to the actions and behaviors of individuals within the sphere of consumption. In this sense Smythe brought political economists one step closer to recognizing the significance of phenomena like peer-to-peer file-sharing by extending Marxian analysis to activities not occurring within the factory walls or on the shop floor. However, the way in which Smythe theorized individual subjectivity did not accommodate analyses of resistance occurring within these spaces.

Smythe correctly pointed out that the communication industry operated both in the market for programming and in the market for audiences (Mosco, 1996). Up until Smythe's (1977) seminal article on the audience commodity, political economists were predisposed to define their subject as the consumer and their activity as leisure. Smythe intentionally blurred the distinction between the spheres of production and reproduction by arguing that the activities of the consumers of mass media products were, in fact, productive. He referred to this as the blindspot of Western Marxism and argued specifically that the real commodity of mass media was not information per se, but the audience itself. Thus Smythe (2001) collapsed the distinctions between base and superstructure, declaring that all of society had been mobilized as a productive force under capitalism. The logic of Smythe's argument ran something like this: if all time becomes work time under capital, then the worker no longer has labor power to sell. This

is because the only time which he chooses not to sell is his leisure time. If his leisure time is now productive time, the worker no longer has labor power to sell because he cannot choose to withhold a portion of it (Smythe, 1977, p. 7).

Thus Smythe answered the productivity question while simultaneously compounding a second problematic tendency within the political economy tradition. Above all capital is a social relation in which the labor of workers is organized to multiply and preserve capitalist accumulation (Marx, 1978). As the surplus wealth of society is therefore given to the indulgence of the capitalist and not the workers, the social relation between capital and labor is antagonistic. However, by demonstrating little or no interest in the actual lived experience of audiences Smythe and many subsequent political economists have provided a theoretical dead-end for any meaningful analysis of capitalist development in terms of the two-sided class relation. Smythe's conceptualization of the nature of audience labor is erroneous because he proceeds first from the assumption of the effective domination of labor in the factory and then extends that domination to the domestic sphere. A detailed examination of actual audience behavior would reveal a much more complicated and richer subjectivity than the mind slaves of Smythe's writings. With such an intellectual heritage it is little wonder that peer-to-peer file-sharing has not received adequate treatment from the political economy of communication tradition.

Today political economy scholars of communication attempt to uncover the social relations congealed in the products of communication, such as newspapers, books, videos, television programming, advertisements, motion pictures, Internet content, and

even the audience itself. Political economists investigate the ways in which communication systems contribute to the development of social hierarchies. Mosco (1996) states, “This would lead the political economist of communication to look at shifting forms of control along the production, distribution, and consumption circuit” (p. 25). Generally speaking then, the political economy of communication seeks to advance our understanding of the social relations organized around the capitalist production of information. Therefore political economic analyses tend to focus on the ownership and control of communications industries, highlighting the ways in which this control facilitates the reproduction of the class relation both in economic and ideological terms.

The structuralist formulations of class domination which seemed to flow naturally from the audience commodity theory and its progeny of one-sided class analyses of communication systems provoked well-deserved criticisms from the cultural studies tradition (Grossberg, 1995). In fact, much of the quality work on audience subjectivity and resistance to the commodification of information has emerged not from political economists, but from cultural studies scholars (Ang 1985; Fiske 2004; Grossberg, 1992; Jenkins 2006). Yet despite its shortcomings, the audience commodity theory deserves credit for bringing the political economy of communication out of the morass of the productivity debate. The audience commodity centers our attention on the activities of people in the sphere of reproduction—activities which had previously been dismissed as simple leisure. In effect, Smythe broadened the inquiry of political economists to encompass activities which have substantial explanatory power for understanding the trajectory of capitalist development. Smythe’s shortcoming was his failure to see the

capitalist attempt to restructure activities occurring within the sphere of reproduction as an expansion of the terrain for class struggle.

In truth, not all political economists who study communication subscribe to rigid forms of structuralism. For example, Vincent Mosco, a prominent figure in the political economy of communication tradition, has stressed the importance of recursive relationships for political economic analysis. Mosco (1996) asserts that there are four ideas which serve as the cornerstones of the political economy tradition—*social change and history*, *the social totality*, *moral philosophy*, and *praxis*. He maintains that each of these four ideas can be used to develop a theoretical framework capable of capturing the dynamics of the class relation and its effects on capitalist development. Mosco uses social change to refer to the dynamic forces responsible for the growth and development of capitalism; social totality to refer to the cross-discipline approach of political economy (everything from sociology, government, law, education, economics, etc.); moral philosophy to refer to the recursive nature of theory; and praxis to refer to the creativity and action which is the motive force for human development. Though much of the work of political economists in the 20th century has demonstrated a preoccupation with exposing the corporate order of the emerging media industries, Mosco provides an analytical framework which allows us to decenter the media industries for research purposes. By focusing on human subjectivity rather than an abstract corporate order, we are able to return some sense of agency and efficacy to the working class side of the social relation.

In his indispensable 1996 book, *The Political Economy of Communication*, Mosco refers to three entry points or processes which are relevant to the project of political economic analysis—*commodification*, *spatialization*, and *structuration*. Mosco (1996) states that these are, “insertions into the social field that provide a substantive focus for thinking about characteristic social practices without suggesting that they provide the essential definition that captures the totality of the field” (p.10). In other words, these are useful starting points for taking up a particular social phenomenon, but they are not meant to be a distillation of the political economy tradition. All three of these concepts—and especially structuration—have informed my approach to the study of the conflict over copyright law.

Mosco uses commodification in the typical Marxian sense to refer to the transformation of use values into exchange values as part of the process of capitalist accumulation. Like Smythe before him, Mosco emphasizes commodification in order to correct the tendency of some communication scholars to overemphasize the content of mass media artifacts. Instead of focusing on the text, political economy focuses on the private and state institutions that produce and distribute information commodities as well as the ways in which these processes contribute to commodification in other areas. Tied to the concept of commodification is spatialization—or the process of overcoming the constraints of space and time. Communication research has had an overriding concern with issues of spatialization at least since the time of Harold Innis (1951). Typically political economists have concerned themselves with the ways in which capital has exploited systems of communication to expand its hegemony. Research in this area has

centered primarily on the institutional extension of corporate power in the communication industries. However, in the study of peer-to-peer networks we see that these same communication systems can be used in ways which are antithetical to the capitalist enterprise.

Mosco cites Anthony Giddens's (1986) theory of structuration as the third entry point for political economic analysis. According to Mosco (1996), "Structuration...describes a process by which structures are constituted out of human agency, even as they provide the very 'medium' of that constitution" (p. 212). Structuration can be seen as a response to the structure/agency problem which has long plagued scholars—including some political economists. Structuration theory⁴ deftly avoids the most vulgar manifestations of structuralist, institutionalist, and functionalist thought. Mosco's emphasis on structuration theory is a welcomed development. The application of structuration theory within political economic analysis could counteract the tendency to engage in one-sided class analyses—though this result is by no means guaranteed.

Consider Ronald Bettig's (1996) treatment of copyright law in his book *Copyrighting Culture: The Political Economy of Intellectual Property*. Bettig argues persuasively that copyright can function as an instrument of the ruling class (alongside ownership over the means of production) to facilitate the accumulation of capital. Bettig shows how copyright exacerbates the problem of monopoly capitalism by raising the barriers to entry in media markets which are already subject to high levels of concentration in ownership. He uses two case studies to make his point: (1) the

⁴ See page 26 for a more detailed explanation of structuration theory.

emergence of the cable television industry and its impact on the filmed entertainment industry; and (2) the introduction of the VCR and its impact on the broadcast industry. Both of these case studies highlight intra-firm struggle between capitalists as a new technology is introduced prior to the establishment of a set of laws governing its use. Bettig demonstrates that if the radical potential of the new technology is not swiftly contained, there exists the potential for technological bypass of the incumbent industries. Thus the state has functioned as an arena of struggle in which copyright holders fight to suppress competition from the firms behind emerging communication technologies.

Much of Bettig's analysis is incisive and informing. Yet despite an explicit reference to structuration theory, Bettig nevertheless pursues his analysis largely in terms of intra-firm conflict. The motion picture industry, broadcasters, and cable operators all came into conflict over the proper function of copyright with regard to the retransmission of televised broadcasts. The radical potential of a new communication technology was suppressed via intra-firm conflict in the legal arena as cable television was methodically brought into the general market structure. The intra-firm conflict and the ensuing industrial reorganization played out through civil, administrative, and statutory law. Likewise, when the VCR was introduced by Sony, media industries moved quickly to extinguish the new threat to their intellectual property. Home audiences had suddenly been given a degree of control over program scheduling which had long been under the exclusive control of broadcasters. By allowing end-users to fast-forward over commercial messages this new time-shifting capability threatened to undo the advertising model

which undergirded the industry. The conflict eventually unfolded both in a landmark Supreme Court case as well as in Congress through a series of “home recording acts”.

Neither of Bettig’s case studies offers a substantive analysis of end-users as they confronted these new technologies. To be fair, the author does acknowledge the “pessimism” of Marxists who often seem preoccupied with theorizing domination. He includes a final chapter on resistance to copyright law in which he mentions various examples of interclass struggle including artists sharing access to their creative works, artists using copyright to control their messages, digital sampling in music, hackers, labor-capital struggles in the entertainment industries, and international conflicts over copyright in trade agreements. But as is all too typical of works in political economy, these acts of resistance appear largely as an afterthought in a nine page concluding chapter of a 276 page book. That being said, by incorporating structuration theory into his work Bettig manages to produce an analytical framing flexible enough to accommodate a two-sided class analysis of copyright law.

The relevant aspect of Bettig’s work to the current project is not so much his framing of capitalist development but his particular analytical approach to law. Like Mosco, Bettig (1996) employs structuration theory in his analysis, stating:

...the task of political economists is to conceptualize economic and social structures and then to tease out the ways in which they affect everyday practice. The routines of everyday life may result in the reproduction, modification, or alternation of these larger social formations. (7)

Bettig does follow in the grain typical of most political economists and restricts his analysis largely to one side of the class relation—that of intra-firm conflict among capitalists—and concludes that structures of constraint are reproduced despite the best efforts of dominated subjects. Nonetheless, Bettig does use structuration theory to show the contested nature of law as a dynamic process contingent on its own continued reproduction through social practices.

Also significant for the current research project is Bettig's theoretical approach to the state. Bettig (1996) enumerates three political economy theories of the state. The first of these is the instrumental approach in which the state appears merely as a manifestation of the dominant class interests. This theory portrays the state as an instrument of domination utilized exclusively by the capitalist class and emphasizes human agency at the level of consciousness (as opposed to unconscious structures). In other words, this approach highlights the decision-making processes of the captains of industry. The second approach is the structuralist approach—usually referred to as either *crisis theory* or *capital logic theory*. Here the state emerges as a response to the continual economic crises that are the result of the contradictions inherent to the capitalist mode of production. This approach stresses the unconscious structural determinations which constrain human activity. The state is continually compelled to intervene in the economy in order to stabilize markets “by reorganizing the processes of production, distribution, and consumption” (p. 118).

The third theory of the state described by Bettig (1996) is the class struggle theory. Bettig introduces Giddens's critique of structuralist theories of the state in which

Giddens argues that structuralism does not account for why government employees, not being themselves members of the capitalist class, would consistently intervene on behalf of the dominant class interests. So rather than dispense with any notion of human subjectivity, the class struggle theory of the state adopts the dialectical approach of structuration theory with respect to structural determinations and human agency. Bettig (1996) states, “This theoretical position stresses the dysfunctional, contradictory, and contingent nature of state intervention into the economy. Theories in this area see the state as a site of interclass and intraclass struggle” (p. 120).

The political economy tradition has endured numerous vicissitudes with respect to its analyses of the production of information. Initially obstructed by the question of whether the production of information constituted productive labor, political economists were somewhat slow to extend their analysis to the emerging information economy. Subsequent analyses recognized the economic importance of information commodities, but did so at the expense of foregoing analyses of the lived experiences of people as they confronted the commodification of culture and knowledge. The emphasis has been primarily on those structures deployed by capitalists as instruments of class domination. Yet the work of Mosco and Bettig also points to another way of understanding the trajectory of capitalist development in the sphere of information production. Structuration theory can accommodate analyses which seek to understand capitalist development as a product of class antagonism.

AUTONOMIST MARXISM

The current research project is informed by Marxian analysis. However, I do not accept political economy as the sole or natural successor of the Marxist tradition. Instead, I draw heavily upon Autonomist Marxism, putting me at odds with much of the political economy tradition. The core premises of Autonomist Marxism were developed in Italy during the 1960s and 1970s (Wright, 2002). It is called “autonomist” because this variant of Marxian analysis focuses on the autonomous activities of workers in the process of capitalist development (Cleaver, 2000). It is important to understand the particular way in which the term *autonomous* is used here. As Dyer-Witford (1999) explains, “Capital, a relation of general commodification predicated on the wage relation, needs labor. But labor does not need capital. Labor can dispense with the wage, and with capitalism, and find different ways to organize its own creative energies: it is potentially autonomous” (p. 68). In other words, there is an emphasis not only on the revolutionary capacity of the working class, but perhaps more importantly, there is an emphasis on the ways in which the working class resists and organizes its activities outside of the wage relation. This mode of inquiry focuses on those instances where the working class attempts to wrest control away from the capitalist class and subvert the processes of capitalist accumulation.⁵

The notion of an autonomous working class has fresh significance in light of the increase in that portion of the economy dedicated to the production of immaterial goods. Marx recognized that in the context of traditional large-scale industry it was capital that

⁵ These instances can include everything from the struggle of indigenous groups like the Zapatistas to carve out autonomous zones (Cleaver, 1998), the so-called *theft* of intellectual property over peer-to-peer networks, to the various wildcat strikes of the early 20th century.

determined the cooperative arrangement of labor. That is to say, capital brought the workers together into the factory, gave them the tools to work with, and determined how cooperation among the workers would be organized. However, with the recent ascendancy of *immaterial labor*⁶, now it is the working class rather than capital which is increasingly likely to determine the cooperative arrangement. That is to say the hegemony of immaterial labor signals a separation of labor power from the explicit control of capitalists.

While both Autonomist Marxism and the political economy of communication tradition have acknowledged the significance of immaterial labor to the overall economy, the difference between the two approaches lies in their respective treatments of the sphere of reproduction.⁷ Mario Tronti (1971), a leading figure in the development of Autonomist Marxist thought, introduced his theory of the *social factory* in which he argued that changes in society were occurring as the result of the generalization of surplus value. Tronti thought this was a consequence of the historic rise in the organic composition⁸ of capital in which production was increasingly reorganized into large-scale machine-based industries. Another influential Italian Marxist, Raniero Panzieri (1976), theorized that this restructuring was due in large part to the successes of workers in their efforts to shorten the workday. In each successive attempt to contain working class struggle in the factories, capital was forced to widen and deepen its mechanisms of control until all of

⁶ Lazzarato (1996) defines *immaterial labor* as “the labor that produces the informational and cultural content of the commodity” (p. 133).

⁷ *Sphere of reproduction* refers to those activities and environments in which workers reproduce their labor power.

⁸ *Organic composition of capital* refers to the ratio between constant capital and variable capital. That is to say the ratio between *the value of materials and fixed costs* and *the value of labor power*.

society eventually became identified with the social relations of the factory. Tronti (1971) stated, “When all of society is reduced to a factory, the factory—as such—seems to disappear,” as does “labour-power itself as a commodity.” Yet unlike Smythe who theorized the expansion of capital into the sphere of reproduction as historically grounded in working class defeat, the Autonomist Marxists saw the reorganization of society under the rules of the factory not as a consequence of working class defeat but rather as a consequence of their successes within the factory. In this sense Autonomist Marxists see a multiplication of the potentials for crises rather than a solidification of class domination.

Moreover, the expanded terrain for potential crises is explained by Autonomist Marxists in terms of a two-sided class analysis. Expanding on the work of Tronti and Panzieri, Antonio Negri wrote a seminal paper in 1968 entitled *Keynes and the Capitalist Theory of the State post-1929* in which he identified the working class as the motive force behind capitalist development. This way of explaining capitalist development is the fundamental starting point for the theoretical framework employed in the current research project. Negri demonstrated that the Keynesian state which emerged from the misery of the Great Depression was not the product of a capitalist defeat of the labor movement but rather the result of successful working class struggle. Critical scholars associated with the Frankfurt School had long theorized the New Deal merely as a capitalist alignment of workers’ qualitative needs with the productive capacity of industry after the Great Depression. Negri argued that, in fact, Keynesian policy was a reaction to the success of the working class in making higher wages and shorter hours the condition for further

capitalist development. Therefore, Keynesian policy manifested as a productivity deal in which increases in productivity were tied to increases in wages, thereby harnessing working class struggle as a motive force for capitalist development (Cleaver, 2000). This is wholly different than proceeding from the assumption of a passive working class whose tastes and wants are simply turned on or off by industry when it suits its purposes. This is the assumption which drives political economists of communication to look almost exclusively to the capitalist side of the class relation to explain the dynamics of capitalist development. However, this approach provides us with only a partial explanation of the trajectory of capitalist development with respect to the production of information. If we understand capital not as an external force independent of the working class—but as the class relation itself—then one-sided class analyses suddenly appear fetishistic. Class relations appear reified and undue social cohesion and efficacy is ascribed to the capitalist side of the class relation. If, however, we conceptualize the class relation as dialectical, we are in keeping with not only Autonomist Marxism but also with structuration theory which views social structures as both the medium and the result of the interactions of human agents engaged in struggles for control.⁹

STRUCTURATION THEORY

Alongside Autonomist Marxism, structuration theory informs the current investigation into copyright and peer-to-peer file-sharing. Anthony Giddens (1986) introduced structuration theory in an attempt to overcome the objective/subjective duality which had impeded a holistic theorization of society. Structuration suggests that the level

⁹ See Giddens's (1986) discussion of the *dialectic of control* (pp. 15-16).

of analysis is neither the experience of the individual actor nor the social structures which constrain the agency of the individual actor. Rather, the analysis centers on social practices ordered recursively across space and time. In structuration theory, structures are conceptualized as the *rules and resources* implicated in social reproduction. Therefore, structuration requires that the researcher investigate those daily activities whereby social structures serve as both the medium and outcome of those activities. Giddens (1986) explains:

The basic domain of study of the social sciences, according to the theory of structuration, is neither the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time. Human social activities, like some self-reproducing items in nature, are recursive. That is to say, they are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors. In and through their activities agents reproduce the conditions that make these activities possible. (2-3)

Structuration theory dovetails nicely with the Autonomist Marxist tradition with respect to two-sided class analysis. Giddens (1986) has critiqued structuralist approaches which fail to treat human agents as knowledgeable. Structuralism fails to appreciate how much knowledge individuals actually possess. It also fails to recognize the significance of a range of discursive phenomena which have potential explanatory power. Giddens (1986) delineates two forms of consciousness which researchers should be aware of: *discursive consciousness* and *practical consciousness*. Discursive consciousness loosely

refers to that which agents can readily put into words while practical consciousness refers to that knowledge which agents use to go on with the routines of their daily lives.

Practical knowledge may be wholly repressed from the consciousness of the agent or appear only in distorted form. Neither discursive nor practical consciousness should be construed as rigid or mutually exclusive categories. Hence structuration theory mirrors Autonomist Marxism's stress on investigating the actual experience of workers engaged in struggle. Similarly the current project eschews relying solely on jurists or industry representatives as the ultimate authorities on the development of either copyright law or information production and distribution technologies. The knowledge embodied within the peer-to-peer file-sharing community figures prominently in the current research.

Autonomist Marxism and structuration theory offer a way out of the rigid structuralism of political economy without betraying the spirit of Marxist inquiry. The political economy of communication has expanded the field of investigation to encompass the sphere of reproduction yet it is still burdened by unrealistic representations of capitalist domination over working class subjectivity. While some political economists have come to embrace the core assertions of structuration theory and recognize the recursive nature of social structures, more work needs to be done to produce an analytical framework capable of explaining the trajectory of capitalist development as contingent on an antagonistic class relation. With respect to the current project, an analytical framework capable of approaching peer-to-peer file-sharing as a manifestation of this class antagonism is required. In order to further this objective I next

survey some contributions to various theories relating to the concepts of power, resistance, the working class, the state (law), technology, and social relations.

POWER

Although highly abstract and seemingly removed from much of the work on peer-to-peer technology and file-sharing litigation, I begin with the concept of power because it forms the basis of all social relations. Many forms of Marxist analysis, including contemporary political economy, inherited a conceptualization of power from early political economists who envisioned power as a zero-sum game in which the existence of a class antagonism merely denoted the domination of one class over the other (Hartley, 2002). In other words, power was conceptualized as subject to scarcity—the only way to get it was to take it from someone else. Herein lies the root of political economy’s rigid structuralist theories of class domination. From this perspective power refers to the ability of one group to impose its will on the rest of society. According to orthodox Marxists, capitalists accomplish this exercise of power in large part by alienating workers from the means of production and through the division of labor. The surplus social wealth generated by the creative capacity of workers is made to benefit capitalists and not the workers. This surplus is channeled back into the processes of production as capital continually expands the capacity to organize society around the imposition of work. Thus capitalist accumulation becomes the ensnarement of living labor by dead labor. As Marx (1990) famously declared “Capital is dead labour which, vampire-like, lives only by sucking living labour, and lives the more, the more labour it sucks” (p. 342).

Foucault (1980) famously reversed this conceptualization of power as direct domination by theorizing it instead as subject to abundance. Power is not a substance possessed by some to the exclusion of others. Rather for Foucault power is a grid of social relations characterized by both domination and counteraction.¹⁰ According to Foucault power actually produces subjectivity as opposed to repressing it. All of Foucault's architectures of power and disciplinary regimes act on a subject who was free prior to the application of power and therefore possessing an innate capacity for resistance. As Foucault (1982) remarked, "Power is exercised only over free subjects, and only insofar as they are free" (p. 221). With this in mind Hardt and Negri (2009) caution that domination and resistance are not external to each other:

We should not think of power as primary and resistance a reaction to it; instead, paradoxical as it may sound, resistance is prior to power. Here we can appreciate the full importance of Foucault's claim that power is exercised only over free subjects. Their freedom is prior to the exercise of power, and their resistance is simply the effort to further, expand, and strengthen that freedom. And in this context the dream of an outside, an external standpoint or support for resistance, is both futile and disempowering. (81-82)

Although most of Foucault's work focuses on the ways in which power is exercised over life, there is always an undercurrent of resistance to the administration of life. However, as Foucault never fully developed this aspect of his work, it has been left to other authors to theorize power as encompassing both domination and resistance.

¹⁰ Although resistance is assigned a role in Foucault's analysis he never formulated a strategy of resistance (see Colin Gordon's afterword in (Foucault, 1980)).

Hardt and Negri's (2009) development of Foucault's concepts are instrumental to the current study. The authors have expanded on Foucault's notion of biopower to theorize something they refer to as biopolitics. In their formulation of power, biopolitics is to biopower as resistance is to domination. The authors state:

Our reading not only identifies biopolitics with the localized productive powers of life—that is, the production of affects and languages through social cooperation and the interaction of bodies and desires, the invention of new forms of the relation to the self and others, and so forth—but also affirms biopolitics as the creation of new subjectivities that are presented at once as resistance and de-subjectification. If we remain too closely tied to a philological analysis of Foucault's texts, we might miss this central point: his analyses of biopower are aimed not merely at an empirical description of how power works for and through subjects but also at the potential for the production of alternative subjectivities, thus designating a distinction between qualitatively different forms of power. This point is implicit in Foucault's claim that freedom and resistance are necessary preconditions for the exercise of power. (58-59)

Here in this conceptualization of power appears a counterbalance to the tendency of political economists to theorize power by emphasizing the ways in which living labor is dominated by dead labor. Instead, the current study shifts the focus to the production of an alternative subjectivity. As Hardt and Negri have argued, the critical aspect of the recent ascendancy of that sector of the economy characterized by immaterial labor¹¹ is

¹¹ Hardt and Negri (2000) define *immaterial labor* as "labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication" (p. 290).

not the continued reproduction of the capitalist social relation, but the production of an explosive new alternative. Biopolitical production exceeds the constraints of capital and opens new terrains for potential crisis through the exercise of power in social relations existing autonomously from capital. Suddenly peer-to-peer file-sharers appear inconsonant with the logic of the capitalist system. They manifest as alternative subjectivities so discordant with existing social relations that even many of their defenders attempt to conceal their incompatibility with ongoing capitalist accumulation.

It is also illuminating to see how structuration theory in many respects complements this particular conceptualization of power. Structuration theory defines power loosely as the ability to achieve outcomes (Woo, 2000). More specifically Giddens (1986) says, “To be able to ‘act otherwise’ means being able to intervene in the world, or to refrain from such intervention, with the effect of influencing a specific state of affairs” (p. 14). In other words, the emphasis in structuration theory is on the individual’s ability to engage a range of causal powers in the course of their lived experience. An agent therefore ceases to be an agent when they lose the ability to exercise some sort of transformative capacity. This closely mirrors Foucault’s argument that power cannot be exercised over a wholly dominated subject.

Furthermore, structuration theory emphasizes both the contingent nature of social systems as well as their relative persistence across space and time. Giddens stresses that a core component of structuration theory is the duality of structure in which social systems are seen as the product of social actions, not as a framework outside of and constraining social action (Woo, 2000). Much as Hardt and Negri (2009) observed that power does not

occupy a position external to individual agents, the contingency of the reproduction of social systems in structuration theory speaks to the intrinsic nature of power. Again

Giddens (1986) states:

We should not conceive of the structures of domination built into social institutions as in some way grinding out ‘docile bodies’ who behave like the automata suggested by objectivist social science. Power within social systems which enjoy some continuity over time and space presumes regularized relations of autonomy and dependence between actors or collectivities in contexts of social interaction. But all forms of dependence offer some resources whereby those who are subordinate can influence the activities of their superiors. This is what I call the dialectic of control in social systems. (16)

RESISTANCE

Terms like resistance, biopolitics, and the dialectic of control speak to the conflict arising as part of the process of commodifying information. However, not everyone sees conflict as an inevitable by-product of commodification. Some researchers question whether or not peer-to-peer file-sharing constitutes a full-blown rejection of the system of commodity exchange. Instead these researchers argue that peer-to-peer file-sharing exists simply because it satisfies desires which existing markets do not meet (Cenite, Wang, Peiwen, & Chan, 2009). Looking back on the events surrounding Napster, Clay Shirky (2001) argues similarly that the civil disobedience on the part of the Napster community should not be equated with a rejection of the pricing system. Instead Shirky argues that

the civil disobedience of file-sharers is in some way analogous to civil disobedience directed at the imposition of highway speed limits:

...the civil disobedience against the 55 MPH speed limit did not mean that drivers were committed to having no speed limit whatsoever, they simply wanted a higher one. So it will be with the music industry. The present civil disobedience is against a refusal by the music industry to adapt to Internet economies. But the refusal of users to countenance per-unit prices does not mean they will never pay for music at all, merely that the economic logic of digital data—its replicability and replenishability—must be respected. Once the industry adopts economic models that do, whether through advertising or sponsorship or subscription pricing, the civil disobedience will largely subside, and we will be on the way to a new speed limit. (34-35)

But the notion that consumers are largely concerned with the economic logic of nonrivalrous information commodities is somewhat difficult to believe. It is nonsensical to assume that the average consumer decides to engage in peer-to-peer file-sharing on the basis of an information producer's marginal costs or the nonrival character of an immaterial commodity. It is likely, however, that peer-to-peer file-sharers are more concerned with their own economic circumstances. That is to say, the proclivity to engage in peer-to-peer file-sharing has more to do with wage struggles (as do most acts of commodity (re)appropriation) than a concern for adherence to abstract economic concepts and principles. It is also counterproductive to set the standard for meaningful resistance at a complete overthrow of the system of commodity exchange. Moreover, the

assertion that people will likely give up on civil disobedience once a new pricing system is adopted by the industry is not evidence of public support for a *new pricing rationale for digital goods*. It could also be evidence of a successful campaign for access to goods at lower prices—in other words, an increase in real wages. Wage struggles are, after all, the archetypical manifestation of the antagonism embedded in the capitalist social relation.

There are other risks associated with analyses of peer-to-peer file-sharing which start from the premise that the practice results from a market imperfection.¹² This approach normalizes the market form and treats the phenomenon of peer-to-peer file-sharing as an aberration. For example, after analyzing the motivations of peer-to-peer file sharers, Cenite et al. (2009) conclude that people use file-sharing platforms to satisfy desires which current markets fail to meet. The authors assert that the situation would be resolved if the industry would make downloading cheaper and more convenient. The problem with such analyses is they don't tell us much about the structural dimensions of peer-to-peer file-sharing which condition alternative social relations. There is no analysis of the structural contradictions between peer-based models and client-server models. Nor do these analyses investigate the structural dimensions of the legal conflicts between file sharers and the content-producing industries. Courtroom battles are ignored. In saying this, I do not mean to devalue the work of inquiring into the motivations of file sharers. It is certainly important, necessary, and insightful work. I am simply suggesting that the

¹² We can think of market imperfection as a scenario in which an industry's pursuit of self-interest results in the inefficient allocation of resources.

study of the stated motivations of file sharers alone is too narrow to give us a complete picture of the class antagonism which fuels this conflict.

In actual fact, I adopt a complete inversion of the above formulation of missing markets. As Hardt and Negri (2009) point out, the ascendancy of immaterial labor within the overall economy has been accompanied by the simultaneous development, extension, and internalization of the commons. That is to say that capital increasingly relies on forms of autonomous cooperative arrangements among workers. Therefore, instead of seeing the commons as a missing market we may see intellectual property as a missing commons. These missing commons are the inevitable result of capitalist crises in which there has been a mad rush to privatize everything including land, water, plants, animals, humans, and culture. To accept the bourgeois framing of missing markets is to apprehend markets as naturally occurring phenomena. Consequently, the bourgeois frame casts resistance as a demand for a better functioning market. If we are in keeping with Foucault's notion of power though, then our starting point should be freedom prior to the exercise of power—at which point markets appear as an exercise of power eliciting resistance from free subjects.

The conflict between capitalists and those who create and maintain the digital commons stems from an exercise of power over the commons. The reason for the predation of the commons is clear. The existence of any alternative system for the distribution of resources is potentially a threat to capitalism. Plainly stated, a commons which exists autonomously from capital can potentially prevent capitalists from putting people to work. In the face of a viable subsistence economy the capitalist must put that

commons to use. He can do this in a two ways. He can enclose the commons and subject it to the law of private property, bringing it properly within the sphere of production. Or he can put the commons to use indirectly, either by gleaning the products of autonomous cooperation found there or by using the subsistence economy as a means to lower wages via a reduction in the costs of reproducing labor power.

With regard to the Internet it is useful to start not from the premise of missing markets but from the premise of a missing commons. Scholars (Minar & Hedlund, 2001; Barbrook, 2000) have demonstrated that the Internet was originally designed principally as a peer-to-peer system. Only with the emergence of the World Wide Web in the 1990s and the widespread adoption of the client-server model did markets become feasible on the Internet. The transition from a system in which computers connected to the network as peers to a system in which millions of client computers connect to a relatively small number of servers is symptomatic of an enclosure movement. As Barbrook (2003) states:

Sharing information is exactly what the net was invented for. Scientists needed unhindered access to each other's research. Hackers enjoyed writing code together. Activists wanted to promote their causes. These pioneers hardwired their own social mores into the technical protocols of the net. Unlike media corporations, they did not make their living from buying and selling information. On the contrary, they were already living within real-life gift economies. (93)

This conceptualization of the Internet in general and peer-to-peer systems in particular allows us to understand the activity of file-sharing as an act of resistance to the enclosure of informational and cultural artifacts. While the act of mounting a legal

defense against the RIAA represents a highly visible act of resistance against the exercise of power, it is nevertheless important to recognize acts of resistance occurring in less visible ways across peer-to-peer networks. In many ways these activities are of even more significance than the legal battles themselves. If anything the dogged persistence of the digital commons in the face of technological and legal encroachment is testament to the limitations of construing technology and law as the sole determinants of human agency. As Johns (2009) comments in his examination of copyright piracy over the centuries:

The relation of piracy to doctrines of intellectual property, in particular, must clearly be a close one; but piracy cannot be adequately described, let alone explained, as a mere byproduct of such doctrines. It is empirically true that the law of what we now call intellectual property has often lagged behind piratical practices, and indeed that virtually all its central principles, such as copyright, were developed in response to piracy. To assume that piracy merely derives from legal doctrine is to get the history—and therefore the politics, and much else besides—back to front. (6)

If intellectual property law is conceptualized as a response to the autonomy offered by the digital commons, then the nature of the conflict is not fully captured by characterizing it as a consequence of ill-fitting business models or overzealous laws. The rise of immaterial labor has allowed for the emergence of phenomena more constructive and creative than can be accurately conveyed by the term resistance (Hardt & Negri, 2009). The creative acts of freedom occurring as part of the digital commons are prior to

enclosure, prior to the exercise of power. Much of the conflict over intellectual property law is fundamentally a struggle over the control of meaning as people engage in new forms of participatory culture while simultaneously challenging the hegemonic control of the old industrial economy. Yet whereas the creative and participatory aspects of amateur production and distribution of cultural artifacts are readily identifiable and celebrated (Jenkins, 2006), the same is rarely said of peer-to-peer file-sharing. Nevertheless peer-to-peer file-sharing is fundamentally a creative social practice. Barbrook (2000) argues that participants in peer-to-peer networks are engaging in cyber-communism whether they realize it or not. The argument Barbrook is advancing is that these file-sharers prefer their method of giving and receiving information in place of capitalist systems of commodity exchange and hierarchical social organization. With this realization in mind we can begin to understand peer-to-peer file-sharing in a way which underscores the notion of the missing commons. From this viewpoint the typical file-sharer is no longer a pirate. She is a steward of cultural artifacts, a producer of meaning, and a maker of community. These people are engaged in sharing—a distinctly un-pirate like behavior. It is the capitalist who is the pirate, attempting to misappropriate the commons and turn it into a commodity. It is the capitalist who steals in order to sell.

We may consider peer-to-peer file-sharing partly as a resistance to commodity exchange. Again, it is more likely that this resistance derives from the concrete conditions of the daily life of the file sharer rather than from some abiding respect for abstract economic theory. It may be part of the wage struggle in the same way that theft is sometimes used to increase real wages. Yet peer-to-peer file-sharing is not merely theft.

There may be no clear link between the economic circumstances of the individual file-sharer and their decision to engage in file-sharing. It is something more than a purely defensive tactic. There is a productive and creative component to file-sharing not captured by terms like theft or piracy or even commonplace usage of the term resistance. However, Hardt and Negri's (2009) discussion of biopolitics deepens the conceptualization of resistance to include forms of exodus. They define exodus as "a process of subtraction from the relationship with capital by means of actualizing the potential autonomy of labor-power" (p. 152). In other words exodus is not a refusal of productive activity—it is a refusal of the restrictive way in which capitalists try to organize productive activities to produce surplus value. "It is an expression of the productive capacities that exceed the relationship with capital achieved by stepping through the opening in the social relation of capital and across the threshold" (p. 152).

Immaterial labor invests workers with the immediate capacity to subvert the processes of capitalist accumulation through exodus. As Hardt and Negri argue, workers are equipped with the capacity for resistance by the class relation itself. Workers can simply say "no more". The ease with which people can engage in exodus is greater with regard to the circulation of cultural or informational commodities than it is for something like food or basic services. This is because the costs of establishing a viable commons in the networked environment can be lower than the establishment of viable commons in the production of say food or housing. This also means that exodus is a viable alternative only to the extent that the digital commons is protected from enclosure. This is why some capitalists are predisposed to extinguish the commons. It is not about theft; theft loses its

essence in the context of nonrival information goods. It is about eliminating an alternative system for the management of resources in order to maintain a system of rent premised on total control of the means of information production.

Although the current project investigates resistance by looking at the social practice of peer-to-peer file-sharing, the legal conflicts over copyright stemming from this practice also have considerable explanatory power for the trajectory of capitalist development. Just as the exodus occurring as part of peer-to-peer file-sharing threatens to undermine the processes of capitalist accumulation, a significant legal victory on the part of any one of these legal defendants has the potential to disrupt the enclosure movement. Therefore, the inquiry must include an analysis of the structural dimensions of both the social practice of peer-to-peer file-sharing as well as the conflict occurring within the arena of law.

Scholars both within the social movement tradition and those critiquing collective behavior theory have recognized the potential for an external threat (such as the existence of a viable commons or the instigation of a litigation campaign targeting individuals) to act as a catalyst for collective action (Staggenborg, 2010; Olson, 1971). In fact, threats as much as opportunities, may inspire feelings of collective outrage and urgency. The capitalist class may act collectively out of a shared fear of the commons. File-sharers may act collectively out of a shared outrage at file-sharing litigation. Hardt and Negri (2009) characterize these feelings of outrage, or indignation, as the raw material of rebellion and revolt. Through indignation, people become aware of their own capacity to act against oppression. These authors state:

The force and resistance that arise from indignation against the abuses and dictates of power, however, can appear immediate or spontaneous and thus naïve (though not for that reason any less powerful). Indignation is born always as a singular phenomenon, in response to a specific obstacle or violation. (236)

It is not difficult to see how a litigation campaign targeting 30,000 to 40,000 individuals for alleged copyright infringement might inspire collective outrage. Outrage shared in common becomes the raw material for collective resistance which serves as the basis for a collective response to mobilize resources in defense of both the commons and individual community members.

Resistance of file-sharers in the peer-to-peer network environment and in the courtroom may appear radically different. It may appear that the exodus of file-sharers to peer-to-peer systems is almost passive when compared to sometimes outspoken defendants who have engaged in high profile court cases with eccentric and charismatic litigants on either side. It would be a mistake however to characterize exodus in this manner. Although peer-to-peer file-sharing occurs largely out of sight from the public eye, the withdrawal from commodity exchange is as potent a threat to industry as any. As Scott (2002) reminds us, desertion and evasion are highly effective tactics. Scott uses the example of the Confederate army, undone in large part by an exodus of poor whites from conscription—“a coalition with no name, no organization, no leadership, and certainly no Leninist conspiracy behind it” (p. 91).

Another useful way of theorizing resistance is offered by the writers of the Midnight Notes Collective. These authors (2009) argue for a distinction between those

forms of resistance which are “inside” and those which are “outside”. Although the distinction is oftentimes difficult to discern, we can define inside resistance as those actions which make demands on those state and private institutions that are normally charged with reproducing the labor-capital relation. Outside resistance refers then to the communal appropriation of de/non-commodified resources. The authors state:

The inside struggles are waged primarily within existing institutions and arenas, such as the state, corporations, the legal system, traditional civil society, or traditional cultural constructs, the goals of which are generally to increase working class income, commodity wealth, and power within the system, without directly challenging the capitalist organization of society or creating collective alternatives to the capitalist system.... By contrast, “outside,” autonomous struggles strive to create social spaces and relations that are as independent of and opposed to capitalist social relations as possible. They may directly confront or seek to take over and reorganize capitalist institutions (a factory, for example) or create new spaces outside those institutions (e.g., urban gardening or a housing cooperative) or access resources that should be common. They foster collective, non-commodified relations, processes, and products that function to some real degree outside of capitalist relations and give power to the working class in its efforts to create alternatives to capital. (13)

In the context of the current research then, exodus and peer-to-peer file-sharing may be distinguished as outside resistance and the demands being funneled through the legal arena may be considered inside resistance. Both forms of resistance may be either

complementary or contradictory. The relation between the two forms of resistance is an important object of investigation. The degree to which each form of resistance finds complementary goals or representation in the other will undoubtedly affect the long term prospects for successful struggle. This congruence between inside and outside is especially relevant in cases where the peer-to-peer community becomes involved in assisting with individual legal defenses as research has shown that the economies of online interaction can be leveraged to facilitate the production of physical goods (Kollock, 1999).

THE WORKING CLASS

Thus far I have not directly addressed the character of the subjectivities which are the target of the current investigation into peer-to-peer file-sharing. Because this research project is informed by Marxian theory it might properly be asked if the conflict over peer-to-peer file-sharing constitutes a form of working class struggle. Political economy readings of Marx tend to employ narrow conceptualizations of working class identity. The working class most often appears as white male factory workers. As Cleaver (2000) notes, “We can thus see that one great weakness of reading Marx as political economy has been to isolate and reduce his analysis to that of the factory” (p.44). Nor does structuration theory offer any additional insight on this point. For Giddens (1986) the working class (at least insofar as the labor movement is concerned) simply constitutes one among a number of social movements. On the other hand, the Autonomist Marxist tradition has further developed the concept of working class subjectivity in a way which allows us to deepen our understanding of class struggle.

Generally speaking, the term class has been used by scholars as a means of understanding both economic and cultural divisions. As Hartley (2002) states, "...class articulates social to economic positions" (p. 28). That is to say that people are divided up based on given sets of economic criteria, and then their class position is used to explain a host of phenomena which are not strictly economic in nature. Traditionally, Marxists have defined class along the lines of the capitalist mode of production. In early Marxist configurations the notion of a working class came to refer almost exclusively to the white male factory proletariat. This narrow conceptualization of working class subjectivity found its theoretical limits in the 1960s with the emergence of diverse struggles by African Americans, students, radical feminists, and welfare rights activists (Cleaver, 2000). All of these groups were largely invisible to a Marxist tradition which saw the working class only as waged workers.

In the absence of serious treatment by Marxists, new social movement theory emerged to explain the nature of new subjectivities engaged in struggle in postindustrial society. New social movement theorists argued that these groups differed substantially from the old labor movement of the industrial age (Staggenborg, 2010). Alternately, the Autonomist Marxist tradition emerged to some degree as a response to both the emergence of new subjectivities and new social movement theory. Autonomist Marxists incorporated these new forms of subjectivity into their theory of class struggle by dispensing with narrow formulations of working class identity. Sexism, racism, and nationalism were understood as particular forms of social division which almost always found expression in the capitalist wage hierarchy.

However, the Autonomist Marxist tradition did not begin with such a generous formulation of the working class. The influential Italian Marxist Mario Tronti, for example, confined his theory of the working class to waged employees (Wright, 2002). Yet, with the emergence of new social movements and various critiques of workerism¹³ came a new understanding of people and their roles in both the spheres of production and reproduction. Antonio Negri captured some of the concerns expressed by social movement theorists in his work on working class subjectivity. Negri (2005) observed changes in class composition which he thought were calling forth a new form of working class subjectivity. He argued that the hegemony of the mass worker of the Fordist factory was giving way to the socialized worker. This new proletariat was disseminated throughout society and functioned as a basis for capitalist accumulation as much by their productive activity in the domestic sphere as in the traditional factory. Negri saw increasing levels of exploitation by capitalists of the mental labor and cooperative social arrangements of the socialized worker, but he also saw increasing potential for crises and rupture of the capitalist system.

Hardt and Negri (2004) further developed this broad notion of working class subjectivity into a concept they refer to as the *multitude*. The authors conceive of the multitude as “all those who work under the rule of capital and thus potentially as the class of those who refuse the rule of capital” (p. 106). This conceptualization of working class subjectivity is distinct from previous incarnations in that it is not premised on exclusions. It is more akin to the anti-globalism slogan, “one no, many yeses”. Not surprisingly it has

¹³ This is usually a negative term describing Orthodox Marxists’ preoccupation with industrial workers to the exclusion of all other social groups. See Wright (2002).

been roundly criticized for being an excessively vague and politically impotent concept. Yet diversity should not be mistaken for a lack of politics. An inclusive understanding of the working class as those who stand against capital allows us to expand the reach of the inquiry to encompass the activities of innumerable people who confront capital in a variety of settings and to analyze these confrontations as possible instances of resistance. In this sense resistance could just as easily appear as a shared file on a peer-to-peer network as a wrench in the works.

The multitude refers to people inserted into the social relations of capitalist production regardless of race, gender, or any other basis of identity. The concept requires us to not get hung up on identity to the extent that it obscures what is common across a great variety of class struggles. It is capitalism which seeks to exploit difference in the service of the division of labor. The generalization of difference into a single social relation premised on alienation from the means of production is the instrument with which capital places the productive capacity of human creativity at its own disposal. Giddens (2008) elaborates:

Bourgeois society makes for a far broader realisation of human productive capacities than was feasible in previous periods of history. But this is only rendered possible by the formation of an increasingly numerous class of propertyless wage-labourers: bourgeois society universalises class relationships around a single class division, between bourgeoisie and proletariat. (45)

This is a fundamental point of departure from many critical studies approaches to identity and one which requires explicit explanation here. From the Marxian perspective,

the working class is an identity which seeks to destroy itself. Hardt and Negri (2009) explain:

This communist proposition is not as paradoxical as it first appears, since revolutionary workers aim to destroy not themselves but the identity that defines them as workers. The primary object of class struggle, in other words, is not to kill capitalists but to demolish the social structures and institutions that maintain their privilege and authority, abolishing too, thereby, the conditions of proletarian subordination. (332)

By eliminating, transcending, or modifying the structures which facilitate the degradation of the multitude into a working class, those subjectivities engaged in class struggle produce new social and institutional arrangements which exceed the constraints of capitalism.

None of this however is to argue for the political superiority of economic class struggle as compared to struggles based on gender, race, etc. The point is to avoid becoming so invested with a particular identity that it becomes an impediment to liberation from the capitalist social hierarchy. To be sure, Marxists are as guilty as anyone of excessive engagement with the politics of identity. At various points in history Marxists have glorified images of the working class and celebrated workers to the exclusion of other groups. The theoretical transformation from the mass worker to the socialized worker to the multitude represents an attempt to recognize the role these various struggles play as part of the class struggle against the social divisions which are constantly mined by capital. The critique that the multitude is a politically useless

concept since it lacks a basis in rigid notions of identity simply falls flat. The increased reliance on immaterial labor in the post-Fordist period produces a new subjectivity which is radically open and plural. Yet capitalists are also pushed to exploit this new subjectivity and its autonomous forms of cooperation. Therefore, the multitude is a subjectivity borne a political creature.

The diversity of subjectivities implied by the multitude who are engaged in class struggle requires us to investigate each instance of struggle. With respect to intellectual property law, Johns (2009) has argued that copyright piracy is something that can only be defined through historical specificity. Johns also cautions against relying exclusively on juridical documents. As he puts it, to do so would be to get the history and the politics “back to front” (p. 6). Similarly, the Marxist doctrine of *historical materialism* asserts that the productive forces of society serve as the basis for the development of legal institutions. That is to say that the real subject of intellectual property law is not information commodities, but the social relations produced by the creation of the legal subject as *a possessor of things*. Therefore we can achieve a better understanding of the nature of the conflict over intellectual property law through an analysis of particular subjectivities engaged in particular historical struggles.

Unfortunately the subjectivities inhabiting peer-to-peer networks are elusive. The boundaries of a community of file-sharers would be difficult to map. The expansion of the terrain of struggle beyond the factory walls makes it impossible to identify class struggle with the waged working class as was done before. Moreover, the participants to struggle in the post-Fordist era don't always imagine themselves as engaging in class

struggle despite being firmly ensnared in capitalist social relations (Kelley, 1996). Even the external threat of RIAA litigation and the collective outrage it inspires may not result in an easily identifiable social subject united in struggle. And even if a social movement were to materialize, there is normally a period of latency during which the new collective identity is forged (Staggenborg, 2010). In truth, the relatively porous and fluid boundaries implied by immaterial labor in general and peer-to-peer networks in particular mitigate against the reification of any such identity. Instead, a general refusal and diffuse anger at the social factory serve alongside autonomous arrangements of cooperation as the common resource around which this multiplicity of singularities coordinates their struggles.

THE STATE

Generally speaking, the Marxist tradition has viewed the rise of the modern state as coinciding with the struggle of the bourgeoisie against the vestiges of feudal society. In his early writings Marx (1978b) saw the state as a product of the development of the productive forces at a given historical moment:

The production of ideas, of conception, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life. Conceiving, thinking, the mental intercourse of men, appear at this stage as the direct efflux of their mental behaviour. The same applies to mental production as expressed in the language of politics, laws, mortality, religion, metaphysics, etc., of a people. (154)

In other words, the bourgeois state emerges from the material circumstances of a particular stage in the development of the productive forces. As much as the modern state was born out of the struggle of the bourgeoisie against feudalism, its form was shaped by the demands of the new economy. Of course the notion of material or economic conditioning of ideas finds its most deterministic expression in the base-superstructure model. Marx discussed the link between the state and the material conditions of production in his polemical Communist Manifesto (1978c) where he states:

...the bourgeoisie has at last, since the establishment of Modern Industry and of the world-market, conquered for itself, in the modern representative State, exclusive political sway. The executive of the modern State is but a committee for managing the common affairs of the whole bourgeoisie. (475)

From the above quotation we see that the state appears as little more than a tool of the dominant class interests. Marx was especially critical of governments like the United States (France and Great Britain also) where the dominant ideology saw the highest goal of the state as the protection of private property. In the bourgeois state freedom was grounded in ownership of private property. The legal subject is defined as a possessive individual in relation to other possessive individuals. This legal formalism further bound the individual to another set of informal laws by naturalizing the capitalist structuring of society through social divisions. Hardt and Negri (2009) state:

The relationship between capital and law defines a paradoxical power structure that is at once extraordinarily abstract and entirely concrete. On the one hand, legal structures are abstract representations of social reality, relatively indifferent

to social contents, and on the other, capitalist property defines the concrete conditions of the exploitation of labor. Both are totalizing social frameworks, extending across the entire social space, working in coordination and holding together, so to speak, the abstract and concrete planes. (22)

If, however, we are to take seriously Foucault's assertion that power is only exercised over free subjects, we must not leave the analysis of law and the state here. We may deepen our understanding of law by recognizing it as a product of the class relation, contingent on discourse and social practice for its continued reproduction. The work of Bernard Edelman (1979) provides such a basis for a Marxian theory of law which might transcend the more vulgar forms of economic determinism. Edelman believed that law is a form of the presentation of the subject. In other words, law constitutes the very subject to which it is referring. A right exists only because the law acknowledges it. The law actively creates the bourgeois subject; it is not a passive recognition of an already pre-existing subjectivity. In bourgeois society the creation and conferral of rights by law is a fundamental component of the organization of society under the capitalist mode of production. In conceptualizing the legal subject as the possessive individual, the law sets commodity circulation in motion. The individual is now capable of self-alienation; she is able to bring her own labor power to the market and put it up for sale. The notion of possessive individualism which undergirds the system of private property makes the capitalist mode of production possible. More importantly, it functions simultaneously to diminish the legal recognition of alternative (non-market) systems of value.¹⁴

¹⁴ This is similar to Boyle's (1996) argument that the *author paradigm* diminishes the public's appreciation of the commons.

The significance of Edelman’s analysis for the current study is his emphasis on the active and contingent production of a legal subject capable of self-alienation. This theory of the recursive nature of the production of the bourgeois legal subject also has much in common with structuration theory. Giddens (1986) conceives of the modern state as encompassing the reflexive monitoring of its own institutions. Accordingly, structuration theory approaches law as a set of rules which are the enduring features of social relations which have some sense of permanence across space and time. These rules are recursively produced by the social activities of knowledgeable actors. Moreover, it should not be assumed that these abstract rules (i.e. codified law), “are the most influential in the structuring of social activities” (p. 22). Therefore, the researcher should investigate not only the ways in which law—conceived of as social practice—is recursively ordered through not only social activities occurring within official legal forums (institutional discourse) but outside those forums (non-institutional discourse) as well. This has led other scholars applying structuration theory to the analysis of law to expand their field of inquiry. For example, Woo (2000) expanded her investigation of copyright cases involving computer programs to include phenomena occurring beyond the confines of the courtroom.¹⁵

The contingent reproduction of the bourgeois legal subject is a result of the law itself being a product of the class relation. This means that the structures implicated in this recursive process are objects of contention. That is to say these structures, conceptualized as rules and resources, are employed by parties with competing interests.

¹⁵ Woo (2000) investigated social variables including the background of the defendants, the political appointment of the presiding judge, the size of litigating firms, available financial resources, etc.

In this sense we can then conceptualize the state, and law in particular, as another terrain of struggle. Negri (2005) has argued that there is no relative autonomy of the state in the period of *real subsumption*¹⁶ and that the state embodies the strength of the collective capitalist class. While it is true that capital enjoys a hegemonic position within the state, it would be misleading to assert that the state is the exclusive purview of the bourgeoisie. It should not be assumed that crisis is extinguished within the state. Here it is worth quoting Hardt and Negri (2009) at length:

Governance, of course, serves to maintain the ruling powers and support the interests of capital, but it never succeeds in solving the crisis and bringing it to an end. In fact processes of negotiation and struggle are constantly reopened on the terrain of governance. In some respects, then, governance is analogous to the old terrain of trade union struggles, and indeed, some authors propose confronting the current forms of governance with the models of negotiation and agreement of labor law. When the old labor leaders used to say, “There is no end to negotiations,” they never questioned the ultimate hegemony of capital but still appreciated the importance of the struggle. We should not underestimate the fact that governance is an open space of conflict and struggle between (sovereign) powers and (social) counterpowers. (348)

Therefore with regard to the concept of the state, the current study adopts a position not unlike Bettig’s (1996) class struggle theory of the state in which the state is

¹⁶ *Real subsumption* refers to a development of the labor process predicated on relative, as opposed to absolute, surplus value. With the real subsumption of labour under capital, this development takes place in the technological process—raising the productivity of the labor process rather than lengthening the working day.

conceptualized as an arena for intra-firm and interclass struggle. This is done to avoid the more structuralist approach to the state and law which is characteristic of the political economy tradition. In her discussion of structuralist approaches to law Woo (2000) states that, “Structuralism focuses on the structural constraints of the system and tries to explain why the structures reinforce class domination and inequalities” (p. 18). This way of conceptualizing the state is characteristic of many Marxist analyses which view the state as the warden of irreconcilable class antagonisms wherein the state emerges as an instrument of capitalist coercion to contain crises. While I don’t dispute the hegemony of capital within the state, I do maintain that law is also to some degree a resource for counter-hegemonic struggle.

TECHNOLOGY

The commonplace definition of technology is often simply the application of scientific knowledge to some productive end. However, the Marxian approach to technology entails investigating why particular labor processes take on particular technological forms. This in turn means giving consideration to both the productive forces and the social relations of production. Here productive force refers to the union of the *means of production*¹⁷ with labor which conditions social, political, and intellectual life processes. The social relations of production refer to that social organization which is consistent with a particular mode of production. Consequently, this approach requires a detailed examination of the ways in which particular technologies are employed. Harvey (2006) states:

¹⁷ The tools and raw materials used in the process of production.

When Marx speaks of ‘technology’ he means the concrete form taken by an actual labour process in a given instance, the observable way in which particular use values are produced. This technology can be described directly in terms of the tools and machines used, the physical design of production processes, the technical division of labour, the actual deployment of labour powers (both quantities and qualities), the levels of co-operation, the chains of command and hierarchies of authority and the particular methods of co-ordination and control used. (99)

The implication is that through the conditioning of material being capital conditions social being. As Marx (1978c) notes, “The bourgeoisie cannot exist without constantly revolutionizing the instruments of production, and thereby the relations of production, and with them the whole relations of society” (p. 476). This is the historical materialist view of technology—one in which technology plays a fundamental role in the production and reproduction of real life which in turn has significant implications for the way in which society is ordered. Writing in the nineteenth century, Marx’s primary emphasis was on the ways in which capitalists employed technology in large-scale industry to disempower workers both by deepening the division of labor and by alienating workers from the instruments of labor. It is worth quoting Marx (1990) at length on this point before proceeding:

Modern industry never views or treats the existing form of a production process as the definitive one. Its technical basis is therefore revolutionary, whereas all earlier modes of production were essentially conservative. By means of

machinery, chemical processes and other methods, it is continually transforming not only the technical basis of production but also the functions of the worker and the social combinations of the labour process. At the same time, it thereby also revolutionizes the division of labour within society, and incessantly throws masses of capital and of workers from one branch of production to another. Thus large-scale industry, by its very nature, necessitates variation of labour, fluidity of functions, and mobility of the workers in all directions. But on the other hand, in its capitalist form it reproduces the old division of labour with its ossified particularities. We have seen how this absolute contradiction does away with all repose, all fixity and all security as far as the worker's life-situation is concerned; how it constantly threatens, by taking away the instruments of labour, to snatch from his hands the means of subsistence, and, by suppressing his specialized function, to make him superfluous. (617-618)

In part because of Marx's emphasis on the deployment of technology as an instrument of domination by capital, a great deal of critical scholarship has construed technological artifacts in a deterministic manner. That is to say technology is regularly seen as an objective and external force with deterministic impacts on social structures. Marxists and political economists have thoroughly examined the role of technology in the processes of class decomposition (Postman, 1993; Noble, 1977). The problem with this view is that it mischaracterizes technology as settled artifacts embedded with structures which are available to only one side of the class relation. Orlikowski (1992) states:

The limitation here is the selectivity with which the notion of human agency is applied, where only managers or technology designers have the authority and means to shape the technology. Human agents such as workers using the technology are portrayed as relatively powerless, and their actions and cognitions as determined by the technology. (402)

Other scholars have challenged deterministic conceptualizations of technology. Scholars in the Social Construction of Technology (SCOT) school, for example, have theorized technology as the product of social interactions rather than as the determinant of social interactions (Bijker, Hughes, & Pinch, 1987). With this approach comes an emphasis not so much on the structures embedded in technological artifacts but rather on the social structures which are responsible for the continual (re)design and modification of technology. According to these scholars, technology is interpretively flexible. Therefore SCOT seeks to discover the meanings ascribed to various technologies by different social systems. However, with most of the emphasis on the initial moments of technological development and on the dimension of signification, this tradition cannot sufficiently explain the role of technology with respect to the exercise of power in capitalist society.

Consequently, I draw an analytical distinction between the technological artifacts themselves and their actual use. In one sense technology demonstrates a degree of persistence across time and space. It is socially conditioned, but transcends the experience of any given individual or any particular moment in time. In other words, technology has a certain materiality which makes it identifiable. In another sense though,

technology can be experienced differently either by diverse individuals or by the same individual at different points in time. The overall set of social structures available to people in different locations or different times can affect which particular structures are selected for use by individuals engaged with technology (DeSanctis & Poole, 1994). In other words technology has a social dimension in addition to its materiality. Orlikowski (2000; 2007) has referred to this duality variously as *technology-in-practice* or *sociomateriality*. From this perspective, technology is seen as a fluid sociomaterial arrangement where everyday activities are inseparably tied to materiality. Orlikowski (1992) comments on this analytical distinction:

In defining my concept of technology, I restrict its scope to material artifacts (various configurations of hardware and software). I wish to sustain a distinction—at least theoretically—between the material nature of technology and the human activities that design or use those artifacts....the analytic decoupling of artifacts from human action allows me to conceptualize material artifacts as the outcome of coordinated human action and hence as inherently social. It also facilitates my framing of the role of technology in terms of a mutual interaction between human agents and technology, and hence as both structural and socially constructed. (403)

Although Giddens never applied structuration to the study of technology, Orlikowski's approach nevertheless has parallels to structuration theory. Technology is the product of human agency both in terms of its original design and subsequent usage. It is in a recursive relationship with human agents as it is continually physically and socially

developed through human interactions. As a consequence of these interactions social practices are conditioned by technological usage. Importantly, technology is not a determinant of human agency as human agency exists prior to and is required for the use of technology. And given that our concept of a particular technology tends to become reified and its connection to human agents obscured by fetishism, the emphasis here is on usage rather than on the artifacts themselves.

Orlikowski (1992) has suggested that human interaction with technology should be analyzed along two dimensions: design and usage. DeSanctis and Poole (1994) describe the normative dimension of a technology's design as the spirit of the technology. The authors state that "Spirit is the general intent with regard to value and goals underlying a given set of structural features" (p. 126). It informs people of the proper way to interact with a technology. However, the authors caution that the intent of the designers can never be fully realized in the spirit—it can only be reflected. DeSanctis and Poole stress that it is essential that researchers attempt to ascertain the structural features and spirit of a technology before attempting to analyze its usage or appropriation.

Normative influence is not restricted to the design of a technology however. Through repeated interaction with a technology certain meanings and behaviors become reified among groups of users. There are different phases occurring as part of the adoption and appropriation of a technology. During these phases the meanings ascribed by group members are influenced by previous adopters (DeSanctis & Poole, 1994). Users draw upon interpretive schemes to communicate meaning while interacting with technology. These structures of signification inform and condition the interaction with

technology (Orlikowski, 1992). In this way the unreflective use of technology by members of a group may perpetuate group norms and function as a structure of domination.

Inasmuch as the use of a particular technology may be subject to normative influences it is important to consider the ways in which a technology may be used to subvert those influences. Structuration theory is dialectical in nature and therefore construes the recursive ordering of social practices as a contradictory process. The recursive ordering of technology may include acts of sabotage, avoidance of use, and the development of informal practices which are unfaithful to the intent of the designers (Orlikowski, 1992). Users actively choose which structures to enact through their interaction with technology. They may circumvent inscribed ways of using a particular technology or invent new ways of using a technology which may or may not be faithful to the original intent of the designers (Orlikowski, 2000). In other words, these acts of subversion are not merely cases of the destruction or negation of a technology. As Negri (2005) says, "Sabotage is innovation" (p. 79). These social practices often entail the development of patterns of technological use which create new cooperative arrangements. Furthermore, these new cooperative arrangements may not be the preferred designs of capitalists.

Any Marxian analysis of technology is decidedly political in nature. The analysis of a given technology must consider for whom a technology was developed, how it was intended to be used, who has access to the technology, and how it is actually used in everyday practice. What's more, the sociomateriality of any given technology is situated

within overlapping social systems (Orlikowski, 2000). Each social system may be characterized by an asymmetry of resources. This asymmetry is likely to change as continual interaction with a technology produces new structures for agents to draw upon (DeSanctis, 1994). In this way recurring interaction with a technology may either reaffirm the subordination of agents or undermine it. Furthermore, social systems may stand in contradistinction to one another. Particular patterns of technological use by one social system may undermine the emergence or maintenance of an alternative social system. This is what Marxists have in mind when they refer to the domination of dead labor over living labor. The continued technological revolution of bourgeois society continually disempowers workers by deepening the division of labor and by alienating workers from the instruments of production. Yet we have also seen that workers may activate technological structures to subvert the bourgeois technological revolution.

Cleaver sees this dual character of the dynamic between dead and living labor occurring as part of the social factory. Accordingly Cleaver (1981) asserts that technology be seen as the:

...organization of 'social' production because in contemporary capitalist society technology has been mobilized for social control not only in the factory but in the organization of the larger social sphere where life is shaped as labor power through housework, school work, church work, and recreational work. (¶ 5)

Cleaver makes two statements regarding the political dynamics occurring as part of the organization of social production. First, both capitalists and the working class wield technology as a weapon in the organization of production and consumption. And second,

technological development occurs within and is shaped by the larger political struggle. This means that technology inasmuch as it is implicated in the organization of social relations is itself a product of class struggle. The resultant crisis of technology is sociomaterial in nature. As technology raises *productivity levels*¹⁸ there is both an increase in production and a reduction in work. The crisis of technology is one in which capital needs to continue to put people to work (socio) but is undermined by its own growing productive capacity (material) while at the same time people begin to demand that capital deliver on the technological promise of more for less work. People are increasingly seeking to control the surplus of social wealth while capitalists scramble to create new systems of control in order to maintain the imposition of work. This crisis manifests both in the sphere of production (as capital seeks out new avenues for investment in production) and in the sphere of reproduction (as capital seeks to arrange leisure activities around the consumption of commodities).

This same dynamic of class struggle is occurring as part of the conflict over peer-to-peer file-sharing. Copyright law functions in part to stabilize capitalist hegemony in the sphere of production. Ever-expanding copyright protections are principally an attempt to ensure the continual flow of rent to capitalists. This entails both the protection of property from competing producers and the maintenance of the social division between consumers and producers. Digital Rights Management (DRM) technologies are an additional means whereby firms may ensure that leisure activity is defined by the consumption of digital commodities. In practice intellectual property law works in

¹⁸ Rising output per hour of labor.

conjunction with DRM to maintain control over both spheres. In either case, the existence of alternative forms of cooperative production and distribution must be extinguished.

We have also seen that the ascendancy of immaterial labor has separated labor power from the immediate control of capital. This is why the expansion of the processes of production from their original location in the factory into the sphere of reproduction is marked by an increase in the potential for crisis. It is not that all of society has fallen under the dominion of capital—quite the contrary. Class struggle in the networked information economy constitutes a struggle over the arrangements of cooperative social practices and the resources produced therein. As Marx demonstrated, technological development revolutionizes social relations. And technologies like the Internet and peer-to-peer systems can have a radical impact on social relations. As much as technology can contribute to the domination of subordinated classes, it can also provide a path for subversion. With respect to the current study these systems have provided a path for the decommodification of information.

PEER-TO-PEER SYSTEMS

Peer-to-peer systems are implicated in the restructuring of social relations. Accordingly, our definition of peer-to-peer technology must take into account its sociomateriality. Shirky (2001) defines peer-to-peer as a class of applications that take advantage of resources at the margins of the Internet. These resources included storage capacity, cycles, content, and people. Given that these resources are connected to the Internet in a somewhat unstable, inconsistent, and unpredictable manner, peer-to-peer technology must (according to this definition) function outside of the Domain Name

System (DNS). Therefore, these systems are fundamentally different from the centralized client-server model. Shirky offers the following simple litmus test for defining peer-to-peer technologies: “(1) Does it allow for variable connectivity and temporary network addressing?; (2) Does it give the nodes at the edges of the network significant autonomy?” (p. 23). According to Shirky, if one can answer yes to both of these questions then the technology is peer-to-peer.

Alternately, Oram (2001) defines peer-to-peer technology with an eye to the history of communication technology. Peer-to-peer technology is an older form of communication architecture which includes everything from IP routing to Usenet to early telephone systems. Initially, the Internet was chiefly a peer-to-peer system. All of the computers connected to the network functioned as both servers and clients. As Minar and Hedlund (2001) have shown, the widespread adoption of the client-server model with the rise of the World Wide Web represents a fundamental break with the spirit of Internet technology. After all, the original goal of ARPANET was to share computing resources across the United States “not in a master/slave or client/server relationship, but rather as equal computing peers” (p. 4). Peer-to-peer technology therefore functions much as the Internet was originally designed and before it was so thoroughly commercialized.

Even if these authors are correct in their assessment of the initial spirit of Internet technology, it does not necessarily tell us anything specific about contemporary peer-to-peer technology. For that we need to look at peer-to-peer technology in the context of file-sharing. To that end Hong (2001) demonstrates how in order for peer-to-peer technology to be viable it must be designed with particular limiting factors in mind. First

among these is the problem of *free riding*. Hong asserts that the essential characteristic of peer-to-peer systems is communication. Therefore a significant decline in system performance would actually be reflective of a peer-to-peer system devolving into something more akin to the client/server model. If this happens, individuals who contribute to the system may be compelled to withdraw. Therefore “system designers must take into account the impact of free riding on performance and devise strategies to encourage higher rates of community participation” (p. 206). This conclusion is not unlike scholarship on other forms of peer-based production. Reid’s (1999) analysis of Multi-User Dungeon online games also demonstrates how cooperation can effectively be programmed into the fabric of the system.

The dependence of peer-to-peer technology on communal participation for the provision of a public good results in a particular technological structuring which recursively conditions the production of new communal social relations. In other words, file-sharing technology is not defined as much by the digital files which are traded there (material) as by the social relations formed by interactions with the technology—interactions which produce a community of users (socio). As Reid’s work on MUDs demonstrates, communities have been forming around various Internet resources for some time. Peer-to-peer file-sharing technology enhances social interactions by allowing for the intelligent management of resources among community members (Oram, 2001). Research has found that the giving and receiving of content over peer-to-peer networks fosters a sense of virtual community as fluid groups form around common interests and the mutual production and sharing of knowledge (Cenite, 2009). Moreover, online

communities rarely exist exclusively in virtual space. Research has demonstrated that virtual communities often spill out into the real world as networks are used to build and enhance communities while also serving as a basis for collective action (Kollock, 1999). The links between online community and real world collective action are explored as part of the current research project. Some of the social interaction facilitated by peer-to-peer technology has been directed toward the mobilization of physical resources as part of the legal defense of individuals accused of copyright infringement. As Oram (2001) reminds us, the use of peer-to-peer technology can be overtly political, as a tool of resistance.

SOCIAL RELATIONS

A central tenant of this research project is that the phenomenon of peer-to-peer file-sharing is rooted in a social system of commoning which is antithetical to commodity exchange. So inimical are these practices of sharing to the logic of capitalist accumulation that peer-to-peer file-sharing has few, if any, defenders in either the private or public spheres. Even those who come to the defense of individual file sharers do so while deftly avoiding outright attacks on the regime of private property. Nevertheless, the threat of peer-to-peer file-sharing stems from its potential to reorder the social relations in the context of information production. Therefore, it is necessary to explore both of the system of intellectual property and the system of commoning to understand what is at stake in the larger context of this particular conflict.

Everyday usage of the term property tends to obscure the particular social relations which are concomitant with social systems based on private ownership. The practical or common sense view of property construes it as a thing or artifact. To the

extent that social relations are acknowledged the discussion is typically limited to the physical occupation or temporary possession of a physical artifact to the exclusion of everyone else. As Marx (1990) expounded in great detail, the circulation of commodities encourages the adoption of this particular way of viewing property. It is a perspective which sees property almost exclusively in terms of its materiality. Legal treatments of property fair little better. Law construes property primarily as a right to exclusive possession. From this perspective the private sphere is thought to function as a bulwark against the tyranny of the state. This is paradoxical given that the private sphere of property would not exist unless the public sphere of law called it into being. The notion of property as an enforceable claim to some use or benefit of something always implies the active participation of the state (Macpherson, 2008). Once we acknowledge the role of the state in the creation and maintenance of systems of private property our definition of property takes on a social dimension in addition to the material dimension. An uneasy legal balance must be sought between private and public interests. Property is an entitlement, a privilege conferred by the state. This entitlement can be either individual or common in character. A single individual may be granted a right to the exclusive use of some resource or a group of individuals may be granted access to a resource. In the context of intellectual property law we might similarly distinguish between an individual right to the exclusive use of a copyrighted text and a public right of access to that same text either through fair use or as a part of the public domain. In short, the balancing of property interests among opposing parties results in a particular set of social relations among those parties.

Under the modern bourgeois state neither the public nor private sphere constitutes a commons. With so much attention given to the tedious balancing of public and private interests, the speciousness of this dialectical arrangement is overlooked. That private property is the antithesis of the commons is a fairly straightforward observation—but the unspoken political reality of the bourgeois public sphere is that it too serves as an indispensable component of the capitalist regime of private property. A commons cannot be produced and maintained by a bourgeois state so far removed from the control of the citizenry. Hardt and Negri (2009) comment on the speciousness of the dialectic between public and private by stating:

The seemingly exclusive alternative between the private and the public corresponds to an equally pernicious political alternative between capitalism and socialism. It is often assumed that the only cure for the ills of capitalist society is public regulation and Keynesian and/or socialist economic management; and, conversely, socialist maladies are presumed to be treatable only by private property and capitalist control. Socialism and capitalism, however, even though they have at times been mingled together and at others occasioned bitter conflicts, are both regimes of property that exclude the common. (ix)

This somewhat puzzling pronouncement requires that I develop a more vibrant definition for the commons than what has generally been discussed thus far. Accordingly this section will attempt to do so by juxtaposing two social systems: the social system of commodification and the social system of commoning.

THE SOCIAL SYSTEM OF COMMODIFICATION

As we have already seen, the social system of commodification is ripe with contradictory tendencies. Various attempts to resolve these contradictions have at times placed more weight on either the private sphere or the public sphere. Of those approaches which have placed greater emphasis on the private sphere as a means to overcome cyclical crisis, neoliberal economic doctrine has been the most predominant. And although neoliberal doctrine has enjoyed a high degree of influence—both as a matter of intellectual convention and actual policy—its polarizing nature has elicited a response from those who would instead afford the public sphere greater weight. In the following pages I survey some of the more pertinent contributions by economists and legal scholars to this debate in the area of information production and intellectual property. My intent is to demonstrate how both of these approaches are in the service of the social system of commodification as both seek to rescue capital from its own internal inconsistencies.

There has been considerable disagreement among mainstream economists over the most effective way of incorporating immaterial labor within the capitalist framework. The problematic nature of information commodities has called into question the proper role of the state. Many economists see little or no job at all for the state in the realm of intellectual property while others see a considerable role for the state in the management of information production and distribution. The privatization and enclosure of resources is often associated with a set of neoclassical economic theories (collectively referred to by critics as neoliberalism) which emphasize a limited role for government and an expanded role for the private sector. Neoliberalism as an economic doctrine of

privatization and globalization began its hegemonic rise in the 1970s and matured under the Reagan Administration, perhaps reaching its worldwide zenith sometime in the 1990s. Initially a response to the crisis of Keynesianism, adherents of neoliberal doctrine sought to devalue labor power, reconstitute wage hierarchies, and roll back the gains of organized labor (MidnightNotes, 2009). In many respects these policies represent a return to 19th century bourgeois economics.

There are a number of assumptions shared by most neoliberal economists. They assume that competition for resources and market-share is inherently beneficial for society. There is general agreement that the benefits and effects of competition are best understood in terms of price (Graham, 2006). These economists also maintain that when competition is allowed to function free of state interference, it will be inherently efficient and yield the best possible outcome. The only economic role for the state is to promote and enforce competition. Typically, neoliberalism relies heavily on the police powers of the state to enforce the exclusionary rights of private property. Harvey (2005) asserts that strong individual property rights, the rule of law, and the institutions of the free market and trade are the hallmarks of the neoliberal state as it is thought that these institutional arrangements are the best suited to guarantee individual freedoms. Harvey states:

The legal framework is that of freely negotiated contractual obligations between juridical individuals in the marketplace. The sanctity of contracts and the individual right to freedom of action, expression, and choice must be protected. The state must therefore use its monopoly of the means of violence to preserve these freedoms at all costs. By extension, the freedom of businesses and

corporations (legally regarded as individuals) to operate within this institutional framework of free markets and free trade is regarded as a fundamental good. (64)

Private enterprise within a competitive market is considered the institutional arrangement most likely to produce economically efficient outcomes, and the greatest amount and best overall distribution of wealth in society. In practice, the hallmarks of neoliberal policy have been the relocation of the means of production, the deterritorialization of capital, expanded labor markets, the dissipation of the welfare state, and the establishment of new regimes of private property (MidnightNotes, 2009).

The global enactment of neoliberal doctrine represents another chapter in the long history of enclosure movements. These enclosure movements typically have involved the extinguishing of established or traditional rights of access to physical resources. The creation and maintenance of private property regimes as a part of this process has been met with resistance and bloodshed. Despite the extraordinary resistance of indigenous peoples, the process of enclosing physical resources is a relatively straightforward matter. However, the unique characteristics of information commodities are responsible for some disagreement regarding the value of enclosing nonphysical resources. In the pages that follow I introduce some of the seminal contributions to that debate while further developing the argument that both private and public sphere approaches to information production and distribution are intended to help capital overcome its periodic crises.

Information Enclosure Debate

Fritz Machlup (1962) was one of the first economists to recognize the increasing significance of that sector of the economy dedicated to the production of information.

Machlup realized that information was a valuable input and output of the production process. Until then, economists had generally assumed conditions of perfect information in which buyers and sellers possessed full knowledge of the market and were aware of all buying and selling opportunities. Machlup argued that under certain conditions this was simply the most efficient and expedient course of action for an economist to take. The choice to make a particular variable exogenous rather than endogenous was a matter of relevance to the economist. However, Machlup pointed to the rise in the ratio of the economy dedicated to the production of information and argued that economists could no longer safely make such assumptions. Information, after all, was often an endogenous variable which could have dramatic effects on the rate of productivity. As capitalism expanded and the division of labor deepened, Machlup saw an increase in that portion of labor which was dedicated to so-called “brainwork” (p. 6). He argued that the first half of the twentieth century had been characterized by a dramatic increase in immaterial labor:

This change involves a continuous increase in “knowledge-producing” workers and a relative decline in what use to be called “productive labor.” The changing employment pattern now shows such a rapid trend toward the use of more brainpower relative to the use of physical strength or physical skills that a serious problem of employability of less-educated members of the labor force arises. (12)

In other words, economists were busy analyzing agriculture, mining, steel production, transportation, retailing, and the production of all sorts of goods and services. Yet they were simultaneously neglecting to analyze the production of knowledge and its implications for the economy.

Machlup was concerned that the production of knowledge was largely unguided by market mechanisms because it was offered to consumers at no charge. Yet he did not support notions of property in the intellectual domain. Machlup believed that notions of property rights in immaterial goods simply obscured the unpalatable reality of conferring monopolistic control over the production of information. From his perspective, the grant of a government sanctioned monopoly over some type of knowledge resource was likely to distort prices rather than serve as their basis. Machlup was also dismissive of the idea of granting intellectual property protections as an inducement for production. Instead, he argued that competition and the fear of technological obsolescence would serve as inducements for continued production. Furthermore, Machlup believed that patents were more likely to benefit the larger incumbent industries and stifle competition by discouraging the entrance of new firms. In light of the ideological commitment by many contemporary neoliberal economists to unfettered markets free from government intervention, Machlup's strong skepticism of intellectual property regimes was prescient.

Though Machlup's work was influential, the neoclassical approach to information commodities was also influenced by an earlier, more radical critique of intellectual property law. Economist Arnold Plant (1974; 1974b; 1974c) wrote several exceptional articles during the 1930s in which he questioned the theoretical basis for both patent and copyright law. Plant (1974) argued that economics did not provide a justification for the establishment of monopolistic price controls in the area of invention. Similarly, he argued that despite the widely held belief that authorship depended upon the conferral of a copyright monopoly to create the necessary economic incentive to produce, there was

little economic reasoning to support that contention. He disagreed with those advocates of intellectual property regimes who held that the bestowal of property rights would make invention and authorship pay better.

Plant questioned the validity of the economic incentive to produce embodied in both patent and copyright law. Pointing to the potential for patent deadlocks, Plant argued that it was possible for patents to stifle innovation either by raising the cost of inputs or by directing inventors and competing firms into areas where they were less likely to infringe on a patent. By playing it safe, these competitors were unlikely to refine and improve upon the existing technology. Accordingly, he maintained that it was doubtful that patents would direct innovation in the best possible direction (Plant, 1974). He also took a similar position on copyright law which he felt was likely to discourage productivity. Plant thought that copyright served to prolong the individual author's income from works he or she had already published. By insulating the individual author from pressures to create out of economic necessity, Plant (1974c) believed that not only was copyright protection unnecessary, but that it was likely to reduce the aggregate output of authors over their lifetimes. He also pointed to those authors who wrote without any hope of remuneration. In fact, many authors demonstrated a willingness to pay for the opportunity to be published.

A common argument advanced by publishers is that the monopolistic control made possible by copyright law allows them to increase their prices. This in turn allows them to cover their losses on the majority of the books they publish which do not cover their expenses. Therefore, it is the unknown author who benefits from these higher prices,

and the total store of knowledge is increased as a result. Instead of seeing the overall benefit to society argued by the publishers, Plant argued against indiscriminate publishing. He freely admitted that without copyright protection publishers would no doubt decrease the number of books that they chose to publish. Competition would have the effect of lowering the receipts from their most successful publications—leaving little left over to engage in risk-taking on behalf of unknown authors. But Plant argued that there are opportunity costs associated with letting unmarketable authors continue to expend their efforts on writing. He made a similar argument for the prolific yet unsuccessful inventor whose main employment seemed to be nothing more than the acquisition of patents. Plant (1974c) stated, “What is generally overlooked by the more enthusiastic advocates of these schemes is the alternative output which the resources would have yielded in other employment” (p. 72).

The basic premise behind Plant’s arguments is that in all other areas economists have assumed that monopolies tend to direct the use of resources to less-preferred utilizations—to less socially beneficial utilizations. If this is so, what does it say about intellectual property regimes? By enabling businesses engaged in technological innovation or publishers producing creative works to capture artificially high receipts, intellectual property law increases the volume of risk-taking. Plant argued that there was little reason for the public to encourage indiscriminate risk-taking free from the constraints of competitive forces. According to Plant, intellectual property law is less efficient than the market for the allocation of resources. In commenting on the

compounding effects of copyright on resource allocation and individual productivity

Plant (1974b) stated:

More authors write books because copyright exists, and a greater variety of books is published, but there are fewer copies of the books which people want to read. Whether successful authors write more books than they otherwise would is a question of ‘the elasticity of their demand for income in terms of effort’—they may prefer now to take more holidays or retire earlier. Some of them are in any case well advised to write different books—instead of writing what they would otherwise want to say or have to say, they find it more remunerative to write the sort of thing for which the demand conditions are most appropriate for ensuring the maximum monopoly profit. (80)

Plant (1974) noted that the peculiarity of patents and copyrights was that, unlike typical property rights which arise out of the need to manage scarce resources, intellectual property served to create a scarcity of resources. What’s more, where we might have expected interference in the system of private property to be aimed at preventing an increase in prices resulting from monopolistic control, in the case of intellectual property law the intervention was aimed at creating monopolistic distortions in the pricing system. Plant believed that the systems of copyright and patent were not only responsible for the inefficient management of information resources but that the systems were unnecessary to secure the production of inventions and creative works. The acquisition of intellectual property rights was only secured at the cost of foregoing competitive markets. Plant believed that if competition were allowed to function in the

place of government intervention it would become unlikely that any single entrepreneur would be able to influence prices by restraining output. Additionally, a competitive market would pressure entrepreneurs to put their resources to work in the maximization of income, thereby yielding the greatest aggregate product. As the market approached the conditions of perfect competition, the production of information would take place at the lowest cost per unit produced. Plant challenged the advocates of intellectual property to explain how a system of monopoly which allowed producers to raise prices by restricting output would yield a greater general usefulness.

This is a damning and powerful critique of intellectual property regimes. It is quite difficult to argue against the price distortions caused by monopoly and the rent-seeking behavior it engenders. Yet Plant's argument is premised on one basic assumption which undermines his advocacy of a market-based approach to information production. In order to achieve an efficient outcome, systems of private property must be characterized by a level of diffusion that prevents any one single owner to influence the price of the property they own. In other words, Plant's argument for market competition as the better regulator of the production of information only holds in the absence of high levels of concentration of ownership. However, most sectors of information production, even in the 1930s, from radio to television to publishing, are not remotely analogous to an environment of perfect competition. This is why Plant (1974) noted that a significant amount of government regulation was directed at discouraging the concentration of ownership which would allow one entity to affect prices. Yet this really does not solve the central economic dilemma. Policymakers were aware of the problematic nature of

government granted monopolies in information, and this is why the grants were of a limited duration. But Plant criticized even the durational aspect of patent and copyright law, calling attention to their arbitrary nature (Plant 1974, p. 51). Ultimately, Plant's proposed solution—the abolition of copyright and patent law—would only displace efforts to discourage concentration of ownership to another terrain. There is little reason to believe that the prohibition of monopolies in information alone would function effectively to counteract the steady march toward concentrations in ownership. In any case, both schemes—whether intellectual property law or antitrust law—require government intervention in the sacrosanct terrain of the market.

Landes and Posner (2003) have built on the innovative work of Plant to further develop a critique of contemporary intellectual property regimes. William Landes is a professor of law and economics at the University of Chicago Law School, as is Judge Richard Posner of the U.S. Court of Appeals for the Seventh Circuit. The Chicago Law School is well known for developing an economic approach to the analysis of law known as law and economics. The law and economics movement shares many of the fundamental assumptions of neoliberalism including an emphasis on limiting the role of the state, understanding price to be the best measure of value, and assuming that free markets are inherently efficient. Generally speaking, the law and economics movement represents a reversal of the relationship between the state and the market. At its most extreme, the law and economics movement asserts that the government exists solely to facilitate the functioning of the market and in any other endeavor government intervention constitutes the creation of an illegitimate system for the management of

resources to the corrupt benefit of special interests. As Purdy (1998) laments, anyone who accepts these basic premises “already has one shoulder on the mat when he subsequently tries to make a case for government regulation...” (¶ 6).

With respect to intellectual property law, the law and economics approach exemplified by Landes and Posner (2003) demonstrates a flexibility which distinguishes the approach from a strict ideological adherence to absolutist notions of property rights. Landes and Posner temper their approach to intellectual property law by formulating a set of economic criteria to apply to different branches of intellectual property law in an attempt to determine the optimal level of protection. Their general approach is to determine the minimum level of protection to afford different types of intellectual property according to the likely level of output obtained with or without the recognition of property rights. The authors then suggest that intellectual property rights be extended only to those areas where output would likely be suboptimal without them. After subjecting the different forms of intellectual property to the rigors of their economic models, the authors still arrive at a set of conclusions which are not far removed from those drawn by Plant seventy years previous.

As with Plant, Landes and Posner (2003) begin their analysis by acknowledging the role played by the legal institution of private property in the management of scarce physical resources. They assert that, in general, there is not a sufficient concentration of ownership in physical commodities to permit a single owner to significantly affect the market price. Conversely, intellectual property law produces scarcity in information goods, the beneficiary of which is made the owner of the entire supply of a product for

which there may be no easily obtainable substitute. In this sense we can say that intellectual property rights produce scarcity while physical property rights manage scarcity.

Landes and Posner (2003) then proceed to elaborate on the functions of property law as it relates to the management of scarcity. The economic function of property law is to substitute a market transaction for a legal transaction. Rather than settling disputes over property in the courts, well-defined property rights allow individuals to enter into contract with each other without the direct intervention of the state. Such a system of private property is preferable to the state allocation of resources in terms of economic efficiency as long as the costs of property rights are lower than the costs of state management of resources. However, there are costs associated with maintaining all systems of private property, and it is the goal of Landes and Posner to determine what level of intellectual property protection is the most efficient. To this end the authors survey the types of costs associated with the maintenance of private property rights.

First there are transaction costs that are incurred when property is transferred from one party to another. Since transaction costs rise with the number of contracting parties, property rights are oftentimes more efficient than attempting to establish individual contracts with all parties. The transaction costs associated with intellectual property tend to be higher relative to physical property because of the difficulty of identifying intellectual property. This is because it has no unique physical expression. For example, imagine the difficulty of transferring the rights to an image, like the Mona Lisa, for reproduction. The sale of the original painting would be relatively simple. Yet selling just

the right to make copies of the original, the idea of the Mona Lisa as opposed to the actual painting itself, is considerably more complex and costly to transact without a set of well-defined property relations to fall back on.

Another cost associated with systems of property rights is the result of obtaining a property right solely for the purpose of charging rent. Rent seeking allows the owner to generate a return over and above the cost of generating the return. In other words, it is pure profit and well worth the costs incurred to obtain the rent (Landes & Posner, 2003). So great is the potential reward that the rent is often nothing more than deadweight in terms of social cost. In such a case, there is no social benefit derived from the behavior. A good example of this phenomenon is the so-called cybersquatting which plagued the burgeoning World Wide Web in the 1990s. Landes and Posner (2003) warn that the nature of intellectual property law, when seen as little more than a grant of monopoly over a particular resource, is likely to induce significant levels of rent seeking behavior which do not serve to increase the general welfare of society. These costs represent a countervailing force to the typical economic incentive justification for intellectual property regimes.

A third cost of property rights results from the effort to secure property—the cost of protection. These costs are incurred not only by both the police and the courts in their attempts to enforce laws against trespass and theft, but also by the property owners themselves as they erect fences both to protect and demarcate their property (Landes & Posner, 2003). The authors point out that the maintenance of these systems only make economic sense when the benefits of securing property exceed the costs of protection.

And in the case of intellectual property, these costs can be significant. It is no easy task to erect a fence around a piece of information. In the absence of specialized legal protection, it may be almost impossible to prevent misappropriation and free-riding. Even discovering that information has been misappropriated can be costly simply because the act of appropriating an immaterial good can be difficult to detect. In any case, property rights in information tend to incur higher costs in all of these areas—transaction costs, rent seeking, and the cost of protection—relative to physical property. It is the function of intellectual property law then to reduce these types of costs. This is why intellectual property rights impose strict limitations on the recipient of an informational good which would not apply to the typical recipient of a physical good¹⁹.

In order to determine the appropriate level of intellectual property protection, Landes and Posner (2003) attempt to balance the costs incurred by the establishment of property rights against the costs incurred by the producers of intellectual property. In doing so, the authors attempt to balance the costs of property against the costs of creating the economic incentive to produce. They begin by investigating the costs of production. With respect to copyright law, Landes and Posner (2003) identify first the cost of creating the work, otherwise known as the cost of expression. It consists primarily of the cost incurred by the author in time and effort and by the publisher in editing and preparing the manuscript for publication. These costs are fixed in that they generally do not vary with the volume of production. The second set of costs is the variable costs—the expenses

¹⁹ Limitations such as *the limited duration of protection* and the various guarantees of *public access to information* are intended to keep input costs at acceptable levels.

incurred during the actual copying process. The variable costs do increase with the number of copies produced.

In those areas where fixed costs are likely to be low, the authors argue that there is little reason for strong intellectual property protection (Landes & Posner, 2003). Likewise, in those instances where the costs of duplication are substantial, intellectual property restrictions may be unnecessary to prevent the misappropriation of information commodities. Where fixed costs are likely to be high, some degree of intellectual property protection may be necessary to ensure that fixed costs are recovered. The concern is that in those areas where variable costs are low there may be an inducement towards rent seeking. In other words, when the marginal cost is approaching zero, the grant of monopoly privilege allows the owner to restrict output and effectively insert a wedge between price and marginal cost. The previously mentioned costs of maintaining property protections in this scenario appear as a deadweight loss to society. Furthermore, in the absence of competitive forces which would drive the price down toward marginal cost, the positive price charged to a consumer might cause them to seek out substitute goods that have a positive marginal cost. Under these circumstances, the cost of supplying the substitute goods would also be a deadweight cost to society. These deadweight costs must be weighed against the costs of denying the producer of intellectual property recourse against those who would misappropriate the information commodity.

Landes and Posner (2003) admit that in a system absent of intellectual property protection the price of a book, for example, will eventually be bid down to the marginal

cost of copying. Under such circumstances, it is entirely possible that the creative work may never be produced in the first place because neither the author nor the publisher would be likely to recoup their fixed costs. However, according to the authors there are a number of factors which would limit misappropriation even in the absence of intellectual property protections. In the case of copyright, Landes and Posner seize upon a similar argument advanced previously by Plant (1974). The argument is that copying takes time, so there will always be a period of time during which the original producer has a jump on the competition. However, in the context of digital media distributed across networks, the interval during which the publisher will be insulated from competition is likely to be so short that this argument is of little relevance. One of the more interesting factors mentioned by Landes and Posner (2003) which might limit misappropriation in the absence of intellectual property regimes is encryption. In the case of copyrighted materials, encryption can provide even stronger levels of protection than property rights. Encryption has the added benefit to the owners of copyrighted material of bypassing the limitations of copyright protection such as fair use and limited duration of protection. However, encryption may also reduce the value of an information commodity by preventing consumers from sharing. In other words, the ability to make copies may be a value which is sought out by consumers.

Landes and Posner (2003) recognize that the cost of expression has fallen in many areas of information production (desktop publishing, digital media production, etc.). There has also been a drop in the variable costs for many forms of intellectual property—especially those amenable to distribution via digital networks. Yet similar

technological developments (encryption which relies on digitization) have allowed intellectual property owners to raise the costs of copying. Intellectual property systems oftentimes work in tandem with these technological restrictions to raise the cost of expression. The cost of expression to authors of creative works increases under these conditions due to the increased transaction costs. Stated another way, the increased costs of acquiring the relevant raw materials which are to be incorporated into the creative work, whether protected by patents or copyrights, translates into an increase in the costs of the economic inputs to production which may contribute to decreased levels of innovation or creative output.

Ultimately, the authors draw a set of conclusions very similar to that of Plant. Having based their conclusions on a growing body of empirical studies, they argue that there are grounds for considerable skepticism of the likelihood for intellectual property systems to produce efficient outcomes. With respect to the patent system, for example, the authors (2003) state, "...incremental increases in patent protection are unlikely to influence inventive activity significantly and incremental reductions might actually enhance economic welfare" (p. 327). Noting the historical progression of the expansion of intellectual property rights, the authors argue that economic analysis does not show that increased levels of intellectual property protection have improved economic welfare.

Debate over a Public Right to Information

We have seen that from the neoliberal perspective the role of the state would be significantly curtailed. Yet if neoliberal doctrine reached its zenith in the 1990s only to be discredited in the first decade of the 20th century, it is possible that we are now

witnessing a resurgence of the interventionist state. Perhaps there was little reason to believe in the resolve of neoliberals to limit the intervention of the state in the first place. As a matter of historical fact, the conferral of property rights in information increased dramatically over the course of the twentieth century. With respect to copyright law, this increase has been both in terms of its scope and duration. And while we have already surveyed the various critiques against state intervention, other scholars have critiqued intellectual property regimes for their tendency to confer excessive property rights in the private sphere while simultaneously degrading public access to informational and cultural goods. Legal studies scholars have advocated instead that the state function as a mediator of crisis by setting aside some resources for common use. The public would be given some enforceable claim to those resources but the extent and quality of this claim is a matter of considerable political dispute.

Historically, there was a steady increase in the economic function of governments across the globe beginning in the second half of the nineteenth century (Samuelson, 1964). In the United States, a significant increase in the active engagement of the state in capitalist planning came in the wakes of the October Revolution of 1917 and the Great Depression. The implications of 1917 loomed over capitalism as normal cycles of boom and bust took on a more sinister and revolutionary appearance. In commenting on the historical rise of the interventionist state Negri (1968) states:

Working-class political revolution could only be avoided by recognizing and accepting the new relation of class forces, while making the working class function within an overall mechanism that would “sublimate” its continuous

struggle for power into a dynamic element within the system. The working class was to be controlled functionally within a series of mechanisms of equilibrium that would be dynamically readjusted from time to time by a regulated phasing of the “incomes revolution”. The state was now prepared, as it were, to descend into civil society, to continuously recreate the source of its legitimacy in a process of permanent readjustment of the conditions of equilibrium. (13)

During this time, Keynes produced his theory of effective demand in an effort to find equilibrium in the balance of power between the classes. The Keynesian project became one in which increases in productivity were strapped to increases in wages, thereby attempting to fold the class dynamic back into the capitalist framework. A deal was struck between the employed and the employer with the state acting as the mediator. This Keynesian vision of the state as the mediator of conflict persisted until the ascendancy of neoliberal doctrine in the 1970s. Not until the financial crisis of the first decade of the 21st century did the interventionist state return to the U.S. political stage.

As we have seen, the neoliberal approach to property in information was characterized largely by rhetorical attacks on the theoretical basis of intellectual property. Notwithstanding neoliberals’ discomfort with notions of property in information, in actual practice there has never been any real deviation from the establishment of private property regimes in the production of information. All the same, the establishment of property rights in information has not been a straightforward affair. As Becker and Vlad (2003) state:

Property is something of value, and it can be transferred, that is, bought and sold. If copyright merely reflected property rights, it would rest with the copyright holder exclusively. But copyrighted works often are created to communicate something to others. It is the nature of this type of property that it can be transmitted to more than one person without using up the product. The receiver does not possess the product in the same way as someone who owns a piece of land. Copyright is designed to protect a form of intangible property. (5)

Copyright and other forms of intellectual property therefore require the state play a far more active role in the management of nonphysical resources than is the case with physical resources. The exclusivity of property rights in physical goods cannot be carried over to the realm of immaterial goods in any simple manner. The nonrival character of information commodities has made the rationalization of property rights in information a much more complicated affair.

Just as limiting the reach of the state into the private sphere constitutes a strategy for the extinguishing of crisis within capitalism, so too does the attempt to use the state to as a means to strike an uneasy balance between public and private interests. As already mentioned, seeking an elusive balance between public and private interest is beset with particular difficulties in the realm of information production. On the one hand capitalists need enough control over the products of immaterial production to be able to extract value from them. On the other hand too much control results in monopolies and excessive rents which increase economic input costs and threaten continued capitalist expansion. Yet no matter what form this balance between public and private interests takes the

primacy of property rights is never truly challenged. In this sense the establishment of a public right of access to information is circumscribed within the capitalist system and therefore part of the social system of commodification.

The commodification of information would not be possible without the complex array of relationships made possible by the various institutions charged with creating and enforcing tort law, criminal law, contract law, property law, constitutional law, administrative law, and statutory law. Oftentimes these legal institutions provide a normative function; at other times they may disrupt the process of capitalist accumulation. The laws which have supported the creation and maintenance of the information commodity have a long history dating back to the Middle Ages. The establishment of property rights in information for the purpose of providing an economic incentive for its production can be traced alternately to the Venetian Patent Act of 1474, the English Statute of Monopolies of 1624, the petition of the English Stationers' Company to Parliament in 1643, the Statute of Anne in 1710, the patent and copyright clause of the U.S. Constitution of 1787, and the U.S. patent and copyright statutes of 1790 (Landes & Posner, 2003). Markets in information are inherently prone to collapse due to the peculiar difficulties associated with commodifying information. In the American legal context this has meant that copyright and patent law have served as an arena of struggle between competing interests over the imposition of the commodity form. Historically, U.S. intellectual property law has channeled the processes of production in some directions and not in others simply because the resulting commodity was more amenable to intellectual property protections (Boyle, 1996); at other times the

development of entire industries has been either facilitated or retarded by the concentration of extensive intellectual property holdings (Bettig, 1996).

Many contemporary legal studies scholars who deal with intellectual property law have been influenced by the tradition of Critical Legal Studies which emerged in the 1970s. This group of legal theorists attempts to expose the incoherence, contingency, and political character of law. The underlying message of critical legal scholars is that law is politics (Mensch, 1990). According to this perspective, rights are constructions of society and not independent of it. Government action is the very foundation of any system of rights, and therefore property rights are not naturally occurring—they are nothing more than government-conferred privileges (Stein, 2006). And the courts, employing their newly discovered power of legal indeterminacy and flexibility, oftentimes act on behalf of the interests of those individuals or groups vested with significant amounts of property and power. In many ways, Critical Legal Studies mirrors the work of political economists in that there is an implicit recognition that law functions within a particular historical and social context. By obscuring power and social relations through a smokescreen of objectivity and quasi-science, law serves to legitimate and enforce those relations (Unger, 1986). Whereas the law and economics movement seeks to anchor these social relations within an unregulated private sphere, the critical legal studies tradition validates these same social relations by advancing a program designed to ameliorate the excesses of the market which would otherwise stoke revolutionary fervor.

Jessica Litman is an influential scholar of copyright law who has explored in detail the tension between public and private interests which arise from the process of

commodifying information. According to Litman (2006), as soon as information becomes valuable, there is an almost overwhelming urge to extract value from it. In the ensuing rush to convert information into property, the public is forced to give up varying degrees of access to information and varying degrees of privacy. To Litman's eye, the problem is that the public is not being consulted in this process, nor are their elected representatives willing or capable of evaluating the terms of the arrangement. At the heart of her thesis is the so-called balance of copyright. Litman's contention, shared by many copyright scholars, is that the Founding Fathers intended for there to be a balance between the need to provide economic incentives for the producers of creative works and the need for public access to information which is a basic requirement of a democratic republic. Therefore, when seen from this historical perspective, copyright cannot simply be equated with property in physical goods. According to Litman (2006), copyright is better described as a bundle of rights which includes the right to reproduce the work, the right to create adaptations, the right to distribute works to the public, and the right to perform or display works to the public. These rights are subject to a number of notable limitations including the doctrine of first sale (the copyright owner has no right to control the distribution of a copy after it has been sold) and fair use (copying is allowable in a number of circumstances including parody, quotation, classroom use, and home videotaping).

An important component of Litman's work is her attention to the legislative history of copyright law. Rather than focusing strictly on the statutes themselves, Litman analyzes the historical context in which the legislation was written. She documents

Congress's increasing reliance over the course of the twentieth century on informal conferences convened by copyright industry representatives to draft the relevant legislation. These conferences have been controversial for a number of reasons—the most problematic of which has been the lack of public representation. The industry has essentially been writing the legislation with little or no public input. Moreover, Congressional representatives have lacked both the political will and the expertise to adequately represent the public interest. This means that the historical process of legislating copyright, culminating in the 1976 Copyright Act, has tended to represent only one side of the balance of copyright. According to Litman (2006), the public's right to access has been steadily eroded since the process began in 1905. She also argues that in more recent years, the information producing industries have increasingly focused their efforts on making the Internet safe for copyright. Framing policy debates both in terms of rescuing economic incentives from large-scale infringement and as a matter of international competitiveness, these industries have had considerable success in creating information policy where access is premised more and more on the ability to pay. This belief in the steady erosion of the original premises of copyright law over the years is shared by other scholars like Vaidhyanathan (2001). The basic premise is that the crisis of immaterial production is not a crisis of capitalism itself. Rather, these scholars believe that a restoration of the historical balance of private and public interests via a relaxation of intellectual property protections will resolve the current crisis.

Litman also draws attention to the transformation in the social dimension of copyright law as new technologies bring everyday people into increasing contact with

copyrighted materials. Copyright law, until recently, primarily mediated the relationship between authors and publishers. However, the Internet has presented a situation where end users are increasingly confronted with copyrighted content. And with the emergence of desktop publishing and networked distribution over the Internet, everyone is now potentially an author and a publisher. Benkler's (2006) work also touches upon recent technologies which condition social interactions in ways which are likely to result in conflicts with copyright holders. Benkler observes that there has been a transition from the proprietary processes of information production characteristic of industrial forms of organization to forms which are more decentralized and non-proprietary in nature. He attributes the displacement of proprietary forms of production by more cooperative and collaborative forms to a new stage in the development of the information economy which he refers to as the networked information economy. Benkler states that:

What characterizes the networked information economy is that decentralized individual action—specifically, new and important cooperative and coordinate action carried out through radically distributed, nonmarket mechanisms that do not depend on proprietary strategies—plays a much greater role than it did, or could have, in the industrial information economy. (3)

Consequently, the incumbents of the old industrial information economy have reacted with increasing alarm at the rise in the role of individual and nonmarket production of information. Benkler (2006) argues that a wide range of laws and institutions—from telecommunications, copyright, and international trade regulations, to the laws governing technological standardization—are being mustered to the defense of

the old economy. Like Litman, Benkler believes that when law has intervened in its regulatory capacity, it has done so primarily to the benefit of those desiring proprietary enclosure. This phenomenon is of particular concern to Litman (2006) who argues that the increased likelihood of people confronting copyrighted content as part of the networked environment effectively constitutes an increase in their burden under the law. Furthermore, Litman maintains that due to the arcane and complex nature of copyright law, particularly as it has developed over the course of the twentieth century, the public has very little understanding of how copyright functions. These concerns have played out in a highly visible manner in the legal confrontations between peer-to-peer file-sharers and copyright holders.

Despite the potential for enclosure Benkler (2006) argues that there is a countervailing tendency towards commons-based approaches to the production of information. Although the historical development of communication systems has been characterized by the concentration of the means of information production into the hands of the few as well as by the commercialization of the distribution of information, Benkler argues that the Internet can be seen as a reversal of these trends. Formerly, the economic character of production was one of extremely high initial outlays of capital accompanied by relatively low marginal costs. However, Benkler emphasizes the contemporary decentralized capital structure of the production and distribution of information which has fueled the growth of the Internet. The economies of scale which were responsible for having muted the transmission of cultural artifacts—except by those with the necessary

concentrations of capital—are in the process of being displaced by the emerging networked information economy.

A core characteristic of Benkler's networked information economy is the declining costs of information production, primarily in the areas of computation, communication, and data storage. He argues that these decreases in cost have allowed the means of production to become increasingly distributed throughout society. Moreover, the fact that individuals now have the capacity (enabled principally by digitization and the Internet) to create cultural artifacts and share them with millions of people across the globe at very little cost, has meant that the nonmarket sector of information production has increased in importance relative to proprietary modes of information production. Additionally, the flourishing nonmarket sector of information production has led to a robust ethic of open sharing and collaborative activity. Benkler sees a number of benefits arising from this development, including increased levels of autonomy for individuals, new avenues for participation in the information-producing environment, and the emergence of a self-reflective and more critical culture.

Conversely, Litman (2006) cautions that current technologies have equipped copyright holders with new methods of extracting value from information. She identifies copyright as one of a number of tools which works in conjunction with various technologies to facilitate the maximum amount of value extraction from information resources. Similarly Lessig (1999) draws attention to the combined use of technology and law to regulate human behavior and activities. He does this by emphasizing four distinct constraints which operate together (though they function differently): law, social norms,

the market, and architecture. This broad view of regulation is fundamental to his formulation of code—the set of constraints which operate in digital networks to shape human behavior and relations.

Lessig (1999) critiques previous discourses which characterized cyberspace as a libertarian utopia, a common theme in the 1990s. He confronts the notion that cyberspace is a place beyond the reach of government control, arguing instead that left to itself, cyberspace will become a “perfect tool of control” (p. 6). Careful to distinguish between perfect and effective control, Lessig believes that the Internet allows for something which approaches perfect control. Generally speaking, he divides code into two categories: East Coast code and West Coast code (p. 53). East Coast code refers to the statutory law enacted by Congress in Washington, D.C. It is a code written in words which directs people how to behave. West Coast code, conversely, is the code that computer programmers enact by embedding instructions into the hardware and software which make up the network. Lessig, like Benkler (2006), uses the concept of “layers” to inform his analysis of code in the context of online communication. The bottom layer is the physical layer of the network: the computers and the wires which link them together. The middle layer is referred to as the logical layer: it consists of the protocols (like TCP/IP) and the software which make the hardware function. The top layer is the content layer: it is what is actually being communicated across the network. Lessig theorizes the effect that each layer may have on the other layers depending on how they are controlled. In essence, he is arguing that each layer could be constructed as privately owned or organized in a commons (Lessig, 2001). Currently the physical layer of the Internet has

essentially been privatized. The upper two layers—the logical and content layers—are a mixed assortment of private and public organization. Lessig claims that private control at the physical layer causes tension at the logical and content layers and that this tension affects incentives for innovation. In addition, this tension displaces the commons of the Internet in favor of commercial architectures of control. Lessig (1999) makes a compelling argument that code, construed as a form of privatized law, will eventually preempt intellectual property law. In other words, intellectual property owners are increasingly inclined to rely on technological deterrents to prevent the misappropriation of information goods—deterrents not burdened by fair use or other legal provisions for public access to information.

Similarly Boyle (1996) has argued that the legal system's approach to intellectual property is above all utilitarian—choosing to commodify information in some instances, while refusing to do so in other instances. But in doing so, the legal system must also provide a rationalization as to why a system premised on granting monopolies to produce economic incentives for production does not simultaneously diminish the public domain. Boyle's thesis is that the legal system accomplishes this objective through an unconscious appeal to a romantic notion of authorship. The legal system thereby provides a rationale encompassing both economic efficiency and social justice. He asserts that the author is positioned between the public and private sphere in an attempt to resolve a contradiction of classical liberalism. He describes the contradiction in the liberal tradition in terms of the liberal state's commitment to the free flow of information on the one hand and its commitment to private property on the other. According to Boyle, the appeal to the

author paradigm bridges the divide between private and public by allowing the author to take from the common pool of ideas and add to it some amount of originality, transforming it into a unique expression belonging to the author alone. Yet there is also an implicit recognition that this new expression adds to the general pool of knowledge and ideas, thereby contributing to the aggregate social welfare. This conceptual distinction between expression and idea functions as a convincing resolution to the public/private paradox of the liberal state. The author paradigm allows the tensions between private property and the public domain to be recast as a natural balance of interests. Boyle's critique of the author paradigm is that it provides a moral and philosophical justification for the enclosure of the commons, "giving the author property in something built from the resources of the public domain..." (p. 57). Consequently, the public's appreciation of the commons as a resource for future creators is diminished. Ultimately Boyle critiques the use of the author paradigm for its concomitant tendencies to create excessive property rights and to confer them on the wrong people. Boyle also emphasizes the contradictory economic pressures exerted on the information commodity. On the one hand, the preoccupation with economic efficiency pushes us to create information flows which are fast and costless. On the other hand, the preoccupation with economic incentives pushes us in the complete opposite direction—to grant monopolies to the producers of information in order to restrict output. It is therefore unsurprising that the economic analyses of intellectual property law have failed to generate a unitary conceptualization of the information commodity.

Still, if the creation of intellectual property rights introduces a host of transaction costs which are likely to mitigate against economic efficiency—a point of general agreement among both neoliberals and critical legal scholars—some type of resolution must be pursued. To this end Boyle (1996) offers some minor reformist policy recommendations such as limiting the duration of copyright to an arbitrary twenty years; a redistributive taxation proposal; and a periodic government auditing of intellectual property—none of which really help him escape the indeterminacy of the utilitarian approach to commodifying information. Litman’s (2006) approach to finding a resolution has been to hearken back to a romanticized past when the balance of copyright was in equilibrium due to the effective regulation of industry by the state. This preferred balance of copyright has also been characterized by Vaidhyathan (2001) as “thin” copyright protection, or “just strong enough to encourage and reward aspiring artists, writers, musicians, and entrepreneurs, yet porous enough to allow full and rich democratic speech and the free flow of information” (p. 5). Benkler’s (2006) answer to the dilemma of balancing private and public interests involves the creation of a structured commons as a part of the networked information economy. He asserts that property, along with contract, constitutes the core institutional component of markets and liberal society. Property rights enable the efficient management of scarce resources. Yet while he concedes the necessity of property rights in goods subject to scarcity, Benkler points out that property rights, by design, constrain the activity of individuals with respect to those resources. Conversely, a commons is structured to enable action that is not based on the exclusive

control of resources. Benkler argues that we are well-advised to consider this alternative approach to information resources because of the nonrival character of information.

In a similar manner, Lessig also asserts (2001) that a commons created and maintained by the state can function to contain the spread of architectures of control. Consequently, these theories of the commons are something which deserves careful attention here. Because Lessig expends more effort developing his notion of the commons, my attention here is directed at his work. Generally speaking, Lessig argues that liberty and freedom in cyberspace will not come from the absence of state activity and regulation. Despite his general skepticism of government intervention, Lessig asserts that government has an important role to play in the establishment and maintenance of a commons. Although his reasoning is somewhat circuitous, Lessig asserts that this government protected commons will serve to limit the intrusiveness of the state. His general point is that code, both East Coast and West Coast, can function as a type of architecture, determining the possible scope and range of human activity. Moreover, when the architecture of the Internet is left in the hands of private enterprise, this architecture can become a type of privatized law.

Alternately, the creation and maintenance of a commons by the state can function as a safeguard against these commercial architectures of control. To support his argument, Lessig (2001) describes the government's intervention into the telephone network during the twentieth century in considerable detail, emphasizing the importance of common carriage to the emergence and growth of the Internet (p. 45). Because AT&T was prevented from controlling the Internet at the logical layer, the government had, in

effect, created a commons on the network. In other words, because the government had erected barriers to private property and ownership, the Internet was free to develop without commercial constraints on networking practices (like peer-to-peer). In effect, Lessig's approach to defining the commons is to describe it as a resource which anyone can use without the need to obtain permission from anyone else. If in some cases permission is needed, he argues that it should be granted in a neutral fashion.

Lessig (2001) frequently refers to the Internet as an innovation commons (p. 40) where innovators can develop and deploy new applications or content without the permission of others. He speaks of both commercial innovation as well as cultural innovation—though his emphasis is squarely on the notion of commercial innovation (the idea of cultural innovation is never fully developed). Lessig's emphasis on innovation is significant. By focusing on innovation he limits his analysis almost exclusively to the so-called productive uses of the commons. In other words, his commons is construed primarily as a resource from which capital is free to draw. Lessig (2001) states that “free resources, or resources held in common, sometimes create more wealth and opportunity for society than those same resources held privately” (p. 86). Here Lessig is seeking a middle ground—to balance public and private control. When a resource has more value because of its openness and being held in common, then it makes the most sense to him to treat it as a commons. Like the law and economics scholars of the neoliberal economic tradition, Lessig's approach to the balance of interests is premised on economic efficiency. In other words, the terms of the debate are the same for both sides, whether they support increased authority for the private sphere or the public sphere. What is

implicit in Lessig's conceptualization of a state-supported commons is that value is being constructed within a capitalist framework. This is why Lessig like many in the reformist camp is explicit in his denouncements of peer-to-peer file-sharing. Non-market systems of value do not enter into Lessig's analysis in any meaningful way despite his cryptic allusion to cultural innovation. A rhetorical focus on innovation allows Lessig to keep the terms of the debate safely within the capitalist framing.

The indeterminacy of Lessig's approach to resolving the contradiction of immaterial production is underscored by his constant vacillation between his adherences to private property on the one hand and property held in common on the other. At some points Lessig (2001) seems preoccupied with vocalizing his support for free-market values, proclaiming, "I am fanatically pro-market, in the market's proper sphere" (p. 6), while at other points he obliquely seems to acknowledge his own complicity in subverting the market. For example, in the introduction to *The Future of Ideas* Lessig (2001) says that he is "disgusted" by his friends who possess pirated DVD collections (p. xvii). Yet in the same book he admits to having pirated music off of Napster without paying for it—though he sheepishly claims that it constitutes only about five percent of his music (p. 194). Lessig's befuddled approach to property stems in large part from his refusal to confront the politics of property head-on. He incorrectly conflates personal property (his house and car) with corporate ownership of the means of production (Microsoft's source code), reasoning that society has equal interest in allowing both parties to keep it to themselves.

Ultimately the failure of Lessig's approach to the commons is that it defines the commons primarily by its utility to capital. The choice between two approaches—commons-based or proprietary—is simply a matter of transaction costs and the desired level of efficiency. The choice is not one between capitalism and something else. In truth, most of the authors surveyed here seek a more efficient incorporation of nonproprietary forms of production into the market system. All of the various formulations and rationalizations of legal scholars with regard to the appropriate role of the state in the establishment of a legal basis for the exchange of information commodities are founded on the desire to find stability for the capitalist organization of society. While these authors all recognize the growing schism between capital's increased reliance on immaterial production on the one hand and the degradation of capital's control over that production on the other, none seek to rupture the basic social relation. Whether they pine for a return to a historical balance of copyright or look forward to new innovations in copyright law, their vision of the commons is politically impotent. As Coleman and Dyer-Witheford (2007) explain:

The reformers, on the other hand, aim at an accommodation between commons and capital. The Creative Commons initiative, for example, argues that cultural production under digital conditions requires a relaxation of copyright regimes, and protection of the role of audiences and sources, not just authors, in creative processes. Heretical as this may sound in an era of neoliberalism, Creative Commons does not challenge the market system, but rather proposes greater

formal assimilation within that system of users and adapter, recognized primarily as commercial agents and digital property holders. (947)

A social system of commoning cannot be delineated by its usefulness to capital. The economic and legal studies literatures simply lack the creative vision for the type of commons conceived as a part of the current study.

SOCIAL SYSTEM OF COMMONING

It is tempting to draw parallels between the contemporary social system of commoning and other historical antecedents. While this can be a useful exercise, it is important not to hearken back to some romanticized vision of the historical commons. As Neeson (1996) reminds us, “Common-field villages did not house serenely self-regulating democratic communities” (p. 320). Where parallels are evident it is useful to invite comparison but not with the intent of resurrecting a utopian agrarianism for the digital age. While the social system of commoning is not always easy to separate from the social system of commodification, there are structural dimensions which vary. Whereas the latter has formal institutions and codified laws demonstrating considerable temporal persistence and visibility, the former is fluid and ephemeral and sometimes rather difficult to pin down. Further complicating matters is the fact that the system of commodification is constantly attempting to either eliminate or assimilate the system of commoning. Therefore in this section I reveal how the social system of commoning is differentiated from commodification and how it serves as a platform for resistance.

As I have mentioned already, I proceed from the position that the alternative between public and private is a false distinction. The attempt to resolve the tension

between the public and private spheres is synonymous with the attempt to resolve the contradictory processes of capitalist accumulation. In the context of the production of information, these contradictory processes manifest as a paradox between the capitalist drive to privatize resources and wealth and its drive to expand the commons (Hardt & Negri, 2009). That is to say the capitalist project of creating an innovation commons is nothing more than an attempt to continue the expansion of the capitalist system itself. Conversely, the social system of commoning is ultimately incompatible with commodification in any guise.

Although there can be considerable overlap between social systems, it is easy enough to differentiate the commons from the commodity form. Coleman and Dyer-Witford (2007) define the commons as resources which everyone in a specific community is free to use while commodities are resources exchanged for profit under conditions of privatized possession. Yet this is not enough to give us a commons which is substantially different from Lessig's innovation commons. In one sense the capitalist commons appears as the wealth which past generations have produced—both in terms of the dead labor embodied in technological artifacts as well as the vast pools of finance which capital has at its disposal (MidnightNotes, 2009). Capital accesses the commons to activate technological and financial structures for the purpose of restructuring society to maximize the extraction of value. Conversely, the social system of commoning involves the sharing of resources outside of the normal processes of commodity exchange. It restructures society in such a way as to make it more difficult for capital to extract value. Therefore, each of these examples corresponds to a differing set of social relations rather

than referring to pools of resources. This is why Linebaugh (2008) believes that “To speak of the commons as if it were a natural resource is misleading at best and dangerous at worst...” (p. 279). Linebaugh understands the commons as a “customary activity, not as a thing or resource” (p. 79). This is why, like Linebaugh, I keep the word in its verb form: commoning.

Hardt and Negri (2009) develop the concept of the commons along two further dimensions. The first aspect includes all “the common wealth of the material world—the air, the water, the fruits of the soil, and all nature’s bounty...” (p. viii). The second aspect (and more significant according to the authors) includes “those results of social production that are necessary for social interaction and further production, such as knowledges, languages, codes, information, affects, and so forth” (p. viii). Broadly speaking, the authors’ distinction between the material and the social loosely mirrors the previous discussion of the sociomateriality of technology. Hardt and Negri emphasize the social dimension of the commons to show that the commons represents a paradox for capital. Access to the common pools of knowledges, codes, and communication networks is essential to the networked information economy. Yet in order to extract value from these commons capital is compelled to attempt to glean value from autonomous social interactions or pursue a program of privatization—both of which diminish the value of the commons. Hardt and Negri state:

Here we run into the first contradiction, because the intensive and extensive strategies of control both destroy the common, the former segmenting or draining the common bases of production and the latter privatizing the common results.

The productivity of biopolitical labor is reduced every time the common is destroyed. Consider, for example, the production of scientific knowledge, a very specialized field but one that shares the basic characteristics of the biopolitical production as a whole. For scientific knowledge to be produced, the relevant information, methods, and ideas, which result from past scientific activity, must be open and accessible to a broad scientific community, and there must be highly developed mechanisms of cooperation and circulation among different laboratories and researchers through journals, conferences, and the like.... The segmentation and expropriation of the common, however, inevitably destroy this virtuous cycle such that capital becomes increasingly a fetter on biopolitical production. (145-146)

It is crucial to understand that the social system of commoning is not merely a mirrored response to capitalism. Commoning is a way of arranging cooperative social interactions with the potential to exist autonomously from capitalist social relations. In other words, commoning is representative of an alternative social system, not merely a reaction to commodification. Commoning produces its own subjectivities. The sociomaterial character of commoning implies that technological artifacts form the material basis for the production of new social subjects. They are mutually constitutive. As the authors of the *Midnight Notes* (2010) put it, "...a commons without a consciously constituted community is unthinkable" (p. 3). Furthermore, the cooperative practices of sharing exist prior to the exercise of power by capital. When enclosure occurs, when the system of private property interrupts commoning, the social relations inevitably change

(Neeson, 1996). In the event of an enclosure, the autonomy of subjectivities engaged in commoning gives way to social relations premised on alienation and hierarchical dependence.

But enclosure is never complete. History shows that there is always resistance. In the context of immaterial labor the resistance of the multitude is grounded in commoning. Resistance occurs around material resources as people struggle for control. Yet the struggle for control is not limited to material resources. People take advantage of the fluid and ephemeral social organizations which are themselves the product of commoning in the networked environment. The true volatility of the immaterial paradox for capital is the production of these new subjectivities. Capital no longer exclusively reproduces its own social relation—a relation premised on both alienation from the instruments of production and dependence on hierarchical social divisions. In the context of biopolitical production capital increasingly produces an open social relation. Hardt and Negri (2009) state:

Capital previously has held together within itself labor-power and the command over labor, or in Marxian language, it has been able to construct an organic composition of variable capital (the wage labor force) and constant capital. But today there is a growing rupture within the organic composition of capital, a progressive decomposition of capital in which variable capital (and particularly biopolitical labor-power) is separating from constant capital along with its political forces of command and control. Biopolitical labor tends to generate its own forms of social cooperation and produce value autonomously. In fact the

more autonomous the social organization of biopolitical production, the more productive it is. Capital thus has ever more difficulty creating a coherent cycle of production and synthesizing or subsuming labor-power in a process of value creation. (150)

The subjectivities of the social system of commoning are a collective threat to capital, equipped with both the autonomy and the means necessary for liberation. As biopolitical production exceeds the constraints placed on it by capital and takes the form of commoning, capital must enlist into its service the very insurgency it seeks to contain.

We have already seen that Hardt and Negri discuss the first dimension of the commons in terms of natural resources like land, water, and air. Similarly Linebaugh (2008) speaks of common rights as being grounded in particular ecologies; "...how will this land be tilled? Does it require manuring? What grows there?" (p. 45). With an eye to the sociomaterial dimension, we might say that these are the material aspects of the commons. But what of the networked environment? It is not a natural resource like land, water, and air. Technology is artifactual. In commenting on technological artifacts, Marxists often refer to the dead labor embodied in technology and the ways in which it is deployed against living labor. This does not mean that the materiality of the artifact has been negated. After all, even land, water, and air become defined as such only through human interaction with the material world. Human agents enact the structural features of natural resources which bring them into relation with humankind as land or water. In the same way biopolitical commoning in the networked environment is grounded in a particular ecology. The Internet and peer-to-peer networks are comprised of various rules

and resources. Human agents define these technologies through commoning by enacting particular structural features of the technology.

The Internet, in effect, functions as a particular ecology locked in a recursive relationship with people engaging in commoning. Like Hardt and Negri, sociologist and Internet scholar Richard Barbrook (2000) has taken note of capital's increased reliance on collective forms of organization. Barbrook argues that the cooperative arrangements adopted by online communities are undermining the capitalist system. Barbrook (2003) says that "Information is for sharing not selling. Knowledge is a gift not a commodity. The net is a strange and novel form of mass communication" (p. 91). Moreover Barbrook argues that the social practice of sharing is a component of the spirit of the technology:

Sharing information is exactly what the net was invented for. Scientists needed unhindered access to each other's research. Hackers enjoyed writing code together. Activists wanted to promote their causes. These pioneers hardwired their own social mores into the technical protocols of the net. Unlike media corporations, they did not make their living from buying and selling information.

On the contrary, they were already living within real-life gift economies. (93)

Therefore, a fundamental difference between the social systems of commodification and commoning is the way in which informational and cultural artifacts are circulated. In the social system of commodification, there is no intrinsic social structure connecting buyers and sellers of commodities after the initial exchange has taken place.²⁰ That is to say that there is no further obligation between the parties to exchange commodities. This is in

²⁰ For this example robust and competitive markets are assumed. Market imperfections, such as monopolies, could produce coercive relations between buyers and sellers.

contrast to the gift economy of commoning in which the exchange of goods involves a general obligation to repay the gift at some other time. Gifts are exchanged between individuals who are engaged in interdependent relationships rather than dependent relationships (Kollock, 1999). That is to say, the exchange of informational and cultural artifacts as part of commoning may serve as the basis for the formation of genuine communities. This is in contrast to the exchange of commodities which tends to obscure social interconnectedness and facilitate the deepening of the division of labor. As Kollock (1999) states:

In a gift economy, benefits come from improving the “technology of social relations” by, for example, increasing the range and diversity of one’s social network. In commodity economics, the benefits come from making improvements in the technology of production. Thus, gift economies are driven by social relations while commodity economies are driven by price. (222)

The particular way in which commoning relates to the formation and maintenance of online communities is of particular concern. This is especially so in light of the critique by Mancur Olson of collective behavior theory. Olson (1971) argued that the assumption by collective behavior theorists that individual members of a group would act to further the common interests of the group was incorrect. Immaterial goods are nonrival and non-exclusive in nature. Such goods are often referred to as public goods. Public goods are nonrival to the extent that their consumption does not lessen someone else’s ability to consume the same good. They are non-exclusive to the extent that it is difficult

to exclude individuals from the enjoyment of a good. This is why Olson argued that the provision of public goods tends toward suboptimal results due to freeriding:

...the amounts of the collective good that a member of the group receives free from other members will further reduce his incentive to provide more of that good at his own expense. Accordingly, the larger the group, the farther it will fall short of providing an optimal amount of a collective good. (35)

Olson's influential critique challenges the very premise I have advanced here regarding the mutually constitutive nature between commons (material) and commoning (social). His critique can be partially answered by re-invoking the previous discussions of the spirit of technology, including both the Internet in general and peer-to-peer systems in particular. These technologies have cooperation in their bones so to speak, as a fundamental structural component of their design. Moreover, the social system of commoning occurring in the networked environment is characterized by a radically different economy of social action than the one which informed Olson's critique. The costs and benefits of social action in the networked environment simply do not correspond to the production of physical public goods. Kollock (1999) states:

The fact that online communities exist in a network of digital information means that there are significant changes in the cost of producing public goods, in the value of public goods, and in the production function of a public good, i.e. the relationship between the amount contributed toward a public good and the proportion of the public good produced. (224)

A reduction in the costs of participation to something approaching zero can have profound behavioral effects which change the essential nature of the logic of collective action. Again, Kollock (1999) states:

The fact that many digital public goods can be provided by a single individual means that in these cases there are no coordination costs to bear and that there is no danger of being a sucker, in the sense of contributing to a good that requires the efforts of many, only to find that too few have contributed. Thus, an important category of costs is eliminated, as is the fear of contributing to a lost cause. And while the fact that something has the quality of a public good has usually meant that it might be difficult to motivate individuals to produce it, in the case of a privileged group²¹ the fact that one's solitary contribution becomes a public good can actually serve as a positive motivation for the person to provide it—there is the hope that it will be seen by and benefit a potentially huge audience. (226)

Still, there is another answer to Olson's critique, one which places emphasis on the social interactions occurring as part of commoning. Staggenborg (2010) argues that Olson focuses on material incentives to the exclusion of focusing on less tangible incentives for contributing to the group. Individual decisions about how much to contribute to the group are not made in isolation but rather by people positioned within social networks. That is to say that the failure of Olson's theory is the failing of bourgeois economics in general—the assumption of a rational self-interested individual. Whereas the social system of commodification is premised on the impersonal and alienating

²¹ Olson (1971) defines a *privileged group* as one in which each of its members have an incentive to see that the collective good is provided (pp. 48-50).

exchange of commodities, the social system of commoning fosters meaningful relationships and the creation of communities, or in Barbrook's (2000) words, a social commons.

Researchers have identified these less tangible and collective rewards for contributing to online communities (Kollock, 1999; Wellman & Gulia, 1999; Cenite et al., 2009). Some community members are motivated by reciprocity—the expectation that they will receive useful goods in return for their contributions. Others are motivated by prestige—the likelihood that their contributions will be noticed by the community and they in turn will receive recognition for their efforts. Others are motivated by efficacy—the sense that their contributions may produce meaningful changes in the community. Another possible motivation is group solidarity, a motivation which has been explored more fully by sociologists in the context of general systems of gift exchange and social movements (Giesler, 2006; Staggenborg, 2010). Gifts and contributions to groups produce systems of social solidarity which stand in relief to the alienated self-interest of commodity exchange. Online gift economies are further characterized by generalized exchange among community members in which the reciprocation of a gift does not necessarily come from the original recipient of the gift but rather from other members of the community (Kollock, 1999). The normative influence of the community ensures the continued production of informational and cultural artifacts which are then made available to community members as needed. Wellman and Gulia (1999) assert that:

Norms of generalized reciprocity and organizational citizenship are another reason for why people help others online. People who have a strong attachment to

the organization will be more likely to assist others with organizational problems. Such norms typically arise in a densely knit community, but they appear to be common among frequent contributors to distribution lists and newsgroups. People having a strong attachment to an electronic group will be more likely to participate and provide assistance to others. (177)

Commoning itself, as a social activity, produces the structures necessary for the formation of a community. In commenting on the historical commons Neeson (1996) states:

Each usage of common waste created a sense of self: it told commoners who they were. Each usage had other meanings too. Every communing economy provided the materials for small exchanges—gifts of things like blackberries, dandelion wine, jam, or labour in carrying home wood or reeds. Some were given for good reason, others for no particular reason at all. But they were all significant because, in peasant societies, gifts helped families with little other reason for contact to make connection with each other, and through connection to establish a kind of safety net. (180)

The safety net in peasant society existed outside of the market, as a subsistence economy affording the community a limited degree of autonomy. The contemporary social system of commoning is also a safety net. Yet this pool of digital resources is not bounded by the strictures of subsistence. There is unlimited digital surplus here, a surplus which can be put at the disposal of building community and resisting enclosure. The commoning of informational and cultural artifacts which constitutes peer-to-peer file-

sharing provides the (im)material and social structures necessary for the formation of a community of file sharers. As we have seen, virtual communities rarely exist exclusively online. Therefore the current research project analyzes the social system of commoning in terms of not only the practice of sharing digital artifacts in networked environments but also in terms of the mobilization of real world resources in defense of community members targeted by the litigation campaign.

THEORETICAL FRAMEWORK

This study begins with the individual file sharer as the primary target of the investigation. I intend to map those connections among sites of experience and social organization which have informed the ways in which these people have confronted the information commodity in the peer-to-peer network environment and in the legal arena. I attempt to shed light on the complex structures extending out from the lived experience of these individuals as they confront the imposition of the commodity form. As the inquiry extends out from where these individuals are located, I will explain how structures function to both position the individual as well as open up new possibilities for social organization and resistance.

The individual peer-to-peer file sharer is not a dominated subject. This study rejects theories of dominated subjectivities as both unrealistic and of little explanatory value. The subjectivities inhabiting the peer-to-peer environment exist a priori to the exercise of power. Through exodus they have left the social relations of commodity exchange and have established a new set of social relations. The freedom of new and alternative ways of relating to fellow members of the peer-to-peer community constitutes

a creative—not reactionary—act. On the other hand, the forces of coercion which seek to produce a subjectivity based on both an alienation from the sociomaterial instruments of production and an insertion into a hierarchical system of social division constitute an exercise of power which is subsequent to the social system of commoning. This is why it is more appropriate to speak of missing commons rather than missing markets in the modern bourgeois state. There is nothing natural about the alienation and hierarchical social division of commodity exchange.

The resistance of peer-to-peer file sharers to the coercive exercise of power by those seeking to commodify information manifests both as exodus from the commodity relation for the purpose of establishing new social relations, and in the mobilization of resources in support of the legal defense of particular group members who have been threatened by litigation. Therefore we can speak of peer-to-peer file-sharing in the context of a contemporary class struggle against an exercise of power seeking to establish social relations based on commodity exchange. The shape and form of this class struggle is the product of a particular moment in the development of the productive forces. The recent ascendancy of immaterial production has necessitated that capital rely on a unity of the means of production and labor existing outside of its direct means of control. Because these subjectivities are no longer assembled by capital within the factory walls, previous notions of working class identity will not suffice. The multitude of singularities which comprise the peer-to-peer community are, however, made common through their collective resistance and establishment of a new form of social relation. Moreover this

resistance and creativity is grounded in a common pool of technological artifacts and practice.

The social system of commoning is ultimately not compatible with the social system of commodification. Critiques of existing intellectual property regimes should not automatically be read as critiques of the social system of commodification. Critiques which support either the withdrawal of the state from the private sphere or its increased intervention therein are most often directed at rescuing the social system of commodification from its own inconsistencies and self-destructive tendencies. Therefore, the current theoretical framework is distinguished from previous approaches in that it does not proceed from the assumption that the social system of commoning is an aberration from naturally occurring markets. Instead, it proceeds with a recognition of the creative and dynamic social relations of commoning among the multitude of subjectivities engaged with cultural and informational resources in the peer-to-peer networked environment. Consequently, the conflict between copyright holders and peer-to-peer file sharers is an example of resistance to the exercise of power over free subjectivities.

Chapter 3 Design and Methodology

RESEARCH QUESTION

What competing conceptualizations of social relations motivate conflicts over peer-to-peer file-sharing?

This research project entails an investigation of the litigation campaign pursued by the recording industry through its media trade organization the Recording Industry Association of America (RIAA) and the practices of file-sharers in the peer-to-peer file-sharing community. The extensive litigation campaign targeting tens of thousands of individual defendants is a recent and unique phenomenon. Copyright law historically mediated the relationship between publishers and authors. Suits filed en masse against individual defendants alleging copyright infringement is historically novel. The emergence of contemporary file-sharing networks has presented the owners of intellectual property with a serious challenge. The behaviors and practices thus far enabled by the networked environment have allowed for the emergence of a digital commons where everyday people are sharing, reappropriating, and creating new informational and cultural artifacts irrespective of the law. As such these practices collectively represent an alternative system of value contradictory to the established capitalist mode of production. The struggle occurring within the legal arena is a struggle over the containment of these practices. It is a struggle between, on the one hand, a system based on private property and continued control over the instruments of information production and distribution, and on the other hand, a system based on the commoning of informational and cultural resources. Moreover, the law is being utilized

as a resource by both sides in this struggle. As of yet there has been no systematic academic investigation of these cases or their effect on the practice of file-sharing.

OVERALL APPROACH AND RATIONALE

The legal conflict between copyright holders and individual defendants has its origins in the everyday/everynight practices of people as they confront information commodities in the networked environment. This study explores the rules and resources²² which function to constrain and enable these practices, leading from the individual's initial contact with information commodities all the way to their eventual legal confrontation with copyright holders. The aim is to analyze the social systems which condition these practices through an investigation of their attendant structures. By establishing where the coordinates of these structures overlap, this study seeks to demonstrate how these social systems are recursively ordered as these structures bring the social activities of individuals into coordination with the activities of others (Smith, 2006). How individual file-sharers come into conflict with copyright holders and how they proceed in that conflict is conditioned by a complex mesh of recursive social relations. Moreover, in the final act of resolving these legal conflicts, these structures influence the shape of the conflict in future legal cases.

²² In structuration theory Giddens (1986) regards structures as the “rules and resources recursively implicated in social reproduction; institutionalized features of social systems have structural properties in the sense that relationships are stabilized across time and space. ‘Structure’ can be conceptualized abstractly as two aspects of rules—normative elements and codes of signification. Resources are also of two kinds: authoritative resources, which derive from the co-ordination of the activity of human agents, and allocative resources, which stem from control of material products or of aspects of the material world” (xxxi).

I examine the structural environment of legal rules and interpretations which have informed particular legal conflicts over peer-to-peer file-sharing. Textual analysis of the relevant court documents and news coverage is conducted with the intent of contextualizing individual cases within the overall history of peer-to-peer litigation. I attempt to identify those structures which have helped or hindered defendants as they attempt to resist the imposition of the information commodity. Exploring the circumstances under which these structures are reproduced helps us understand their contingent nature and inform future attempts at resistance. In addition to file-sharing litigation, I analyze the community of file-sharers to determine the rules/resources which inform and enable their engagement with informational and cultural goods. After identifying the rules/resources implicated in the coordination of file-sharing activities, I analyze the social meanings embedded in these structures with an eye to explaining how the ongoing litigation targeting individual file-sharers has impacted the community of file-sharers.

PREVIOUS APPLICATION OF STRUCTURATION THEORY TO COPYRIGHT LAW

It should be noted that this research project does not represent the first application of structuration theory to the analysis of copyright law. Jisuk Woo's (2000) study on copyright law and computer programs influenced the current research design. In her work Woo examined how judicial actors, including defendants, plaintiffs, and judges, interacted during strategic communication activities, and how these interactions influenced the structure of copyright law. Woo analyzed the decisions and legal arguments used in all of the U.S. federal court cases between 1987 and 1993 involving

copyright protection of computer programs. She utilized news discourse analysis as part of her methodological approach to the examination of individual court cases. Her analysis began with the pre-existing structural rules and resources which constitute the law and moved toward an examination of how the interactions between the litigants and the judges work to reproduce or transform copyright law.

Woo's study is informative as far as legal analyses go, but her research design differs from the current approach in that it does not allow for an in-depth investigation of the activities occurring outside of the courtroom. She made good use of discourse analysis and categorized the framing of legal arguments as follows: (1) author versus copyright holders; (2) public interest versus private property rights; and (3) the work versus the author. She also analyzed social influences on law by investigating the types of resources available to individual litigants and judges. These resources included legal resources (the ability to gather and communicate information effectively), money resources (the ability to recruit and prepare specialized lawyers and experts), and status resources (the ability of a programmer to cast him- or herself as an author). In addition, Woo analyzed judges as potential resources by considering the political nature of their appointment to the bench. However, her analysis of the factors occurring outside of the courtroom was more circumscribed than the typical Marxian approach would specify. Her conclusions were derived principally from the analysis of courtroom argumentation and the applicable legal precedents and statutory law. She made no attempt to see if the actual views of litigants corresponded with the strategic communications of their attorneys. Furthermore, because her field of inquiry did not include cases which focus on

the actions of end-users of computer programs, the ways in which law shapes and is shaped by the everyday/everynight activities of end-users was unexplored. For that reason, there is limited direct applicability in her research design with respect to the current study. That being said, Woo's research is useful as a general guide to the development of the current research project.

STRUCTURAL DIMENSIONS OF SOCIAL SYSTEMS

The current study investigates the competing understandings of file-sharing as examples of distinct social systems. Giddens (1986) conceptualizes social systems as, "The patterning of social relations across time-space, understood as reproduced practices. These social systems should be regarded as widely variable in terms of the degree of 'systemness' they display..." (p. 377). Sewell (1992) expands on Giddens's concept and states:

By "social systems" Giddens means empirically observable, intertwining, and relatively bounded social practices that link persons across time and space. Social systems would encompass what most social scientists mean by "societies" but would also include social units greater (e.g., the capitalist world system) or more limited (e.g., the neighborhood community) in scope than the nation-state. Social systems, according to Giddens, have no existence apart from the practices that constitute them, and these practices are reproduced by the "recursive" (i.e., repeated) enactments of structures. (6)

I have already identified the two social systems which give voice to the competing understandings of file-sharing. On the one hand there is the social system of

commodification which views file-sharing as an act of theft and a threat to continued capitalist expansion. On the other hand there is the social system of commoning which views file-sharing as an exodus from commodity exchange for the purpose of establishing a new form of social relation.

Structures as sets of rules/resources have a particular relation to these social systems. As Sewell (1992) asserts, “Structures are not the patterned social practices that make up social systems, but the principles that pattern these practices” (p. 6). Structures are virtual in the sense that they are socially produced and do not exist concretely in time and space. They are instantiated in action. Therefore, Giddens (1986) maintains that social systems must be analyzed with an eye to both their social and system integration. Social integration refers to the reciprocity of practices between actors in circumstance of co-presence (direct encounters) and system integration refers to reciprocity between actors or collectivities across expanses of time and space (lacking co-presence). Giddens (1986) analyzes these dimensions of social systems in terms of time-space distanciation, or “The stretching of social systems across time-space, on the basis of mechanisms of social and system integration” (p. 377). These concepts are useful in the assessment of peer-to-peer communities. To what extent can we speak of a virtual community of peer-to-peer file-sharers? Are there principles which translate into shared practices among peer-to-peer file-sharers? How are these principles affected by the alternative forms of co-presence characteristic of networked environments? If there is a community here, how do we define its boundaries?

Giddens (1986) asserts that there are three structural dimensions of social systems: signification, domination, and legitimation. By signification we mean that structural dimension in which meaning is produced through discursive practice. Domination refers to that structural dimension in which power originates from the control of resources. Legitimation refers to that structural dimension in which moral order is produced through societal norms, standards, and values. Giddens (1986) illustrates the three structural dimensions in a table reproduced here in Table 3.1:

Table 3.1: Three Structural Dimensions of Social Systems

Structure(s)	Theoretical Domain	Institutional Order
Signification	Theory of coding	Symbolic orders/modes of discourse
Domination	Theory of resource authorization Theory of resource allocation	Political institutions Economic Institutions
Legitimation	Theory of normative regulation	Legal institutions

It should be noted that these three types of structures are separable only analytically. Structures of signification always bear some connection to domination and legitimation on so on. These three dimensions can be applied to both the social system of commoning

and the social system of commodification. These two social systems along with their structural dimensions are presented in Table 3.2:

Table 3.2: Structural Dimensions of Commodification and Commoning

Social System	Signification	Domination	Legitimation
Commodification	Discourse of Private Property	<p>Authoritative</p> <p>Resources: trade groups, federal executive departments, politicians, musicians, lawyers, ISPs, Universities, news media</p> <p>Allocative</p> <p>Resources: money, technological artifacts (network, DRM, client applications)</p>	<p>The Constitution of the United States of America, statutory copyright law, case law, international trade agreements, district courts, appellate courts, Supreme Court of the United States</p>

Table 3.2 (continued)

<p>Commoning</p>	<p>Discourse of Gift Economy</p>	<p>Authoritative Resources: peer-to-peer community, non-profit advocacy groups (Electronic Frontier Foundation, Public Citizen, etc.), musicians, lawyers, law students, news media Allocative Resources: legal defense funds, technological artifacts (p2p client applications), copyright blogs, p2p websites</p>	<p>Copyright Clause in The Constitution of the United States of America (for a limited duration), statutory law (public domain), case law (Fair Use, Doctrine of First Sale),online gift system</p>
------------------	--------------------------------------	--	---

As structures are considered virtual in structuration theory—existing only as memory traces or as moments of instantiation during social activity—they could not exist without language. Therefore it is imperative that structures of signification be explored. The resources of language and their utilization are contingent on a given set of social relations. As Hartley (2002) notes, “Discourses are the product of social, historical and institutional formations, and meanings are produced by these institutionalized discourses” (p. 74). Accordingly, the discourses of each social system under investigation must be analyzed. The range of possible meaning is defined in part by each social system’s mode of discourse. It is fairly easy to see how the discourse of private property precludes alternative systems of social value. What is less obvious is the range of meanings conditioned by the discourse of gift economies. For that reason, much of the current investigation centers upon the meanings that the peer-to-peer community assigns to various aspects of file-sharing.

Domination requires a somewhat more extended explanation here. Domination refers to that structural dimension in which power originates from the control of resources. Giddens theorizes that there are two further dimensions to these resources: allocative and authoritative. Giddens (1986) explains, “Allocative resources refer to capabilities—or, more accurately, to forms of transformative capacity—generating command over objects, goods or material phenomena. Authoritative resources refer to types of transformative capacity generating command over persons or actors” (p. 33). Dissatisfied with Giddens’s explication of allocative and authoritative resources, Sewell (1992) offers the following:

Resources are of two types, human and nonhuman. Nonhuman resources are objects, animate or inanimate, naturally occurring or manufactured, that can be used to enhance or maintain power; human resources are physical strength, dexterity, knowledge, and emotional commitments that can be used to enhance or maintain power, including knowledge of the means of gaining, retaining, controlling, and propagating either human or nonhuman resources. Both types of resources are media of power and are unevenly distributed. But however unequally resources may be distributed, some measures of both human and nonhuman resources are controlled by all members of society, no matter how destitute and oppressed. Indeed, part of what it means to conceive of human beings as agents is to conceive of them as empowered by access to resources of one kind or another. (9-10)

We can use the allocative and authoritative dimensions of resources to deepen our understanding of the social system of commoning. Let me begin first with allocative resources. We can say that the re-appropriation and making available of digital files over peer-to-peer networks constitutes a form of digital poaching analogous to the historical acts of resistance to the enclosure of the terrestrial commons. These acts of theft were justified by commoners as assertions of customary right (Coleman & Dyer-Witheford, 2007). Still, the pool of resources in the digital commons encompasses much more than just a collection of MP3 files. There is an authoritative aspect to the digital commons as well. As the circumstances surrounding the legal defenses of the individual defendants in these copyright cases demonstrate, the peer-to-peer community, lawyers, and public

interest groups are all mobilized in some capacity to resist the entertainment industry's efforts to enclose the digital commons.

Part of what defines the boundaries of a social system is the prevalence of normative elements or structures of legitimation. Once again, it is important to remember that 'social systems' should not be used to designate sets of social relations that are always clearly differentiated from others. In other words, there may be considerable overlap between social systems. Specialized institutions²³ develop within social systems to produce a shared moral order. These may appear as a set of structural constraints (rules and sanctions). They may just as easily appear as a set of structural enablements (resources and rewards). Therefore, with respect to the social system of commodification the investigation centers upon those legal structures which facilitate the imposition of the commodity form. With respect to the social system of commoning the investigation centers not only on those same legal structures but on the social norms established among peer-to-peer file-sharers.

SUBSIDIARY RESEARCH QUESTIONS

The preceding discussion of the three structural dimensions of social systems allows me to deepen and focus the investigation through the development of the following subsidiary research questions:

Social Systems

How do end users engage with the social system of commoning?

²³ Giddens (1986) defines *institutions* as "...chronically reproduced rules and resources" (p. 375).

Does the social system of commoning have definable boundaries?

Does the peer-to-peer file-sharing community demonstrate reflexive self-regulation?

What is the nature of social and system integration²⁴ within the peer-to-peer file-sharing community and what is its impact on social solidarity?

Signification

What meanings do file-sharers and jurists discursively assign to file-sharing?

What meanings do file-sharers and jurists discursively assign to the economic exchange of information commodities?

How do the meanings differ across social systems? Are they oppositional?

Where do these meanings come from?

Domination

What are the authoritative resources deployed by the peer-to-peer file-sharing community?

What are the allocative resources deployed by the peer-to-peer file-sharing community?

How is the control of various allocative and authoritative resources implicated in the social system of commoning and the social system of commodification?

Legitimation

What are the institutions which produce the norms, values and standards in each social system?

²⁴ See page

How do these institutions function to produce the norms, values and standards in each social system? What are the rewards and sanctions?

Do these structures of legitimation overlap? Are there shared norms, values and standards across social systems? Are there oppositional norms, values and standards?

SITE AND POPULATION SELECTION

I provide a historical analysis of file-sharing litigation. This analysis includes discussions of the various legal actions taken against peer-to-peer developers as well as litigation targeting a number of individual defendants. Cases involving individual defendants or cases involving joinder of large numbers of defendants were selected based on precedent significant to the overall litigation campaign. For example, two cases in the RIAA litigation campaign resulted in jury trials. The cases are *Capitol v. Thomas* (2009) and *SONY BMG Music v. Tenenbaum* (2009). As a part of the research design I conducted interviews with litigants and provided an analysis of the legal arguments in each case. They are politically significant cases—meaning they are extremely influential in both formal legal and popular discourses. The *Thomas* and *Tenenbaum* cases have set legal precedents which will affect the shape of the conflict in future cases. Additionally, the cases are well-known to those who are involved with or familiar with the copyright infringement campaign. Jammie Thomas of *Capitol v. Thomas* received widespread media attention as her case was the first to make it all the way to a jury trial. Thomas is a Native American mother of four from Minnesota who was ordered to pay close to \$2 million following a retrial of her case. The intense media coverage of this case centered not only on the incredibly high damages awarded to the plaintiffs, but also on the

celebrity status of her attorney, Kiwi Camara, who took her case pro bono. Joel Tenenbaum is a Boston University graduate student who was ordered to pay plaintiffs \$675,000 for illegally downloading 31 music files. A high-profile website (www.joelfightsback.com) was launched on Tenenbaum's behalf as Charles Nesson, a member of the Berkman Center for Internet and Society at Harvard University, has guided a team of Harvard law students who provided Tenenbaum's defense. All of the relevant court documents for each of these cases are available through the website of a prominent New York attorney named Ray Beckerman who is involved in much of the peer-to-peer litigation. This made accessing the necessary materials for the textual analysis of the institutional discourse a relatively easy affair.

In addition to these court cases I also utilized a number of peer-to-peer file-sharing websites as a platform from which to solicit participants for both interviews and an online survey. These sites include [p2pNet.net](http://p2pnet.net), TorrentFreak.com, WePirates.org, P2PTalk.org, Systema.in, InstantIdiocy.com, and IDTorrent.org. I gained access to a population of file-sharers from which I drew a sample of 346 online survey respondents. Interviews were conducted using Skype/email and the online survey was conducted using SurveyMonkey. As this research project is limited to mapping those structures which condition the activities of people extending out from the local to the larger social totality, it was not necessarily my intent to draw a sample from which generalizable conclusions could be drawn. I am not concerned here so much with personal biographies or with generating analytical categories of file-sharers—though the sample certainly serves as a solid basis for the generation of such categories. Instead it is my hope that this research

project provides a map of the coordinates of the intersecting structures implicated in the struggle between the competing visions of peer-to-peer file-sharing. The real target for analysis is the social system of commoning more so than the community of peer-to-peer file-sharers. That is to say that this project is more concerned with technology-as-practice and its intersection with other legal and economic institutions than it is with making generalizations about a specific community of peer-to-peer file-sharers.

DATA GATHERING AND ANALYSIS

Survey Research

One component of this research entails an investigation of the everyday/everynight practices of the individual file-sharers which bring them into contact with information commodities. A second component of this research entails an investigation of the mobilization of legal resources in defense of individual file-sharers. An investigation of these two dimensions allows me to analyze the structures through which this legal conflict with the copyright holders is shaped and made possible. Accordingly this research includes survey research of individual file-sharers. This component of the project entailed the use of an online questionnaire posted to SurveyMonkey.com. The objective of the survey was to gather data to facilitate the development of categories of file-sharing practices along the structural dimensions of signification, domination, and legitimation. These categories will serve as the foundation for future survey research on file-sharing. In addition, the online survey served as an

initial point of contact with potential future interviewees. Preliminary questions are presented below.

Possible Survey Questions for File-Sharers

Signification (symbolic orders/modes of discourse)

What is peer-to-peer file-sharing? Describe for me how peer-to-peer file-sharing works.

How do you do it?

Why do you use peer-to-peer file-sharing? When do you use it and for what purpose?

How do you contribute to the peer-to-peer community? How do you decide when and how much to contribute?

How did you decide to share songs using peer-to-peer technology?

When would you use a pay service like iTunes?

What is copyright? What function does it serve?

What did you know about copyright when you started peer-to-peer file-sharing?

Did you think you were breaking the law?

How did participating in peer-to-peer file-sharing affect your views about copyright?

Do you feel like you own the songs you have acquired through peer-to-peer file-sharing?

When do you own music? What should someone be able to do with a song once they own it?

How much control should the artists have over their songs? How about the fans?

Is it fair to call the peer-to-peer community pirates? Are they criminals?

Domination (The mobilization of authoritative and allocative resources)

How did you first hear about file-sharing?

What do you need in order to start file-sharing? What technology do you need?

How did you learn to do it? Did anyone help you? Who? Did you read about it? Where?

How do you hear about new music? Do you tell others about the music you enjoy?

Is there an online peer-to-peer community? Do you feel like you belong? Do you have friends in the community?

How do you communicate with people in the peer-to-peer community? What sorts of things do you talk about?

Do you have friends in the physical offline world who are also members of the peer-to-peer file-sharing community?

What groups or individuals have been the most sympathetic to your case? Who has not?

Who has helped you fight the RIAA's lawsuit and how have they helped you?

What did you know about the other people targeted by the RIAA? Did you have contact with any of these people?

What are the most important resources you have had in your legal defense?

What do your friends and family think about your case?

What do you think the final outcome of the RIAA's attempt to stop copyright infringement in peer-to-peer networks will be? Why?

Legitimation (Standards, Values and Norms)

Do we need copyright law? For what? Does copyright law need to change? If so, in what way?

Do you think copyright law is too restrictive? In what way? What types of copying/sharing should be allowed?

Should peer-to-peer file-sharing be made illegal? What reasons would you give?

What position does the RIAA take on peer-to-peer file-sharing? What do you think of the RIAA? What is the function of the RIAA? Had you ever heard of them before your case?

Why do you think the RIAA sued you?

What has the RIAA mischaracterized about you or your case?

How did you come to decide to fight the RIAA's lawsuit? Why didn't you just take the initial settlement?

What issues were at stake in your case?

How would you have liked the courts to decide?

What do you think about the size of the damages in your case? Generally speaking, what do you think a fair level of compensation would be for individual songs?

Who do you think has more control over songs—the RIAA or the artists?

How should musicians feel about peer-to-peer file-sharing? Are there benefits for them?

What effect has this experience had on your expectations for the future?

Analysis of File-Sharing Litigation

A second component of the research project involves an analysis of the legal arguments made as part of the actual litigation in each case. Many of these texts are included as part of Appendix 2. The use of these statutes, court documents, and legal opinions entailed the creation of analytical categories for the various framings of legal arguments used therein. These categories are (1) legitimate versus illegitimate uses of

communication systems; (2) legitimate versus illegitimate uses of informational and cultural goods; and (3) legitimate versus illegitimate use of court resources. These categories are interrelated, but not necessarily mutually exclusive. Similarly Woo (2000) developed three analytical categories for her textual analysis of the framing of legal arguments. These included (1) authors versus copyright holders; (2) public interest versus private property rights; and (3) authorship versus work. Because her categories were developed for court cases which turned on issues pitting authors against publishers, these categories have limited applicability for the current study. Accordingly, the categories developed herein turn more on the issue of infringement itself and the applicability of copyright law to private individuals.

As to the specific types of court documents which will be used as a part of this content analysis, I consider both primary and secondary sources. The reports of cases generally tend to be reflective primarily of the judges' opinions and legal reasoning. These reports are only indirectly representative of the arguments made by the plaintiffs and defendants. Therefore my analysis includes the briefs filed by each litigant. Furthermore, because of the high profile nature of each of these cases, a number of amicus curiae briefs were submitted to the courts. These too inform the analysis as many of these briefs were filed by organizations who claim to be advocates of the digital commons. Generally speaking, I examine all of the available court documents and consult secondary sources when available.

LIMITATIONS

The current research project is limited to the extent that it is primarily exploratory and explanatory in nature. Therefore, the current research project will have very little to offer in the way of generalizability. Although much of the emphasis in this research is directed at social institutions which coordinate social practices, this should not be read as a type of structuralist analysis. The situatedness of the individual actors as well as the contingent nature of the practices which are (re)created and expressed through the very structures which are the target of analysis prevent me from arriving at any universal conclusions. That is simply not the intent. As Giddens (1986) explains:

That there are no known universal laws in social science is not just happenstance. If it is correct to say, as I have argued, that the causal mechanisms in social scientific generalizations depend upon actors' reasons, in the context of a 'mesh' of intended and unintended consequences of action, we can readily see why such generalizations do not have a universal form. For the content of agents' knowledgeability, the question of how 'situated' it is and the validity of the propositional content of that knowledge—all these will influence the circumstances in which those generalizations hold. (345)

ETHICAL CONSIDERATIONS

I do not intend any part of this research to have negative legal consequences for any of the individual defendants or file-sharers used as a part of this study. With regard to ongoing cases or those awaiting appeal, I have been in contacted the respective legal counsels to ensure the legal well-being of their clients is maintained. With regard to the

individual file-sharers used as part of this study I have kept their identities anonymous whenever it is pertinent to do so.

CONCLUSION

In the final analysis, I hope to provide a clearer picture of the social tensions around copyright law as they pertain to the targeting of individual file-sharers. First, I hope to get a better picture of the knowledgeability (both discursive and practical) of file-sharers with respect to their everyday confrontations with information commodities. Each social system (commodification and commoning) employs a particular mode of discourse. An examination of the meanings embedded in the discursive and routine practices of individual file-sharers should begin to unearth this particular structural dimension of the social system of commoning. Second, I would like to illuminate the structures of domination which have enabled individuals to create and maintain a digital commons as well as to defend themselves in their conflict with copyright holders. In other words, how has the mobilization of both authoritative and allocative resources transformed the nature of the conflict? And third, I hope to shed light on the structures of legitimation which produce the values, norms and standards of the social system of commoning. The ultimate aim of this research project is to shed light on the differing understandings of file-sharing exhibited by competing social systems. After a close examination of the structural dimensions of the social system of commoning, I hope to establish the existence of a set of social relations centered on the practice of online commoning which actively resist the ongoing processes of commodification.

Chapter 4 Histories of Commodification and Commoning in the Production and Distribution of Music

In 1971 the distinguished Marxist historian E. P. Thompson wrote an article entitled “The Moral Economy of the English Crowd in the Eighteenth Century” in which he attempted to articulate the underlying principles informing the actions of commoners engaged in food riots during the 18th century. In contrast to the traditional depiction of the riots as a product of angry and uncontrolled mobs, Thompson established empirically the existence of a complex belief system which informed the actions of rioters as they intervened in the market system. Thompson referred to the ideas and values which sustained the commoners’ belief system as a moral economy. In this context the moral economy refers to the interplay between non-capitalist cultural attitudes and economic activity, often manifesting as popular resistance to capitalist social divisions. According to Thompson, the moral economy of 18th century English commoners figured significantly in thousands of uprisings against the merchant class and nascent bourgeois institutions. The notion of a moral economy has subsequently been employed by other scholars like James Scott (1977) who analyzed the moral economy of peasant rebellions in Southeast Asia. The concept of a moral economy has proven useful to scholars attempting to uncover the politics of social phenomena which may at first glance appear to be unguided by anything more than a mob mentality at one extreme or pure self-interest at the other.

There is certainly a temptation to de-politicize peer-to-peer file-sharing by ignoring the social cohesion among file-sharers or by portraying them as purely

opportunistic individuals simply taking what has been made freely available to them. Yet it would be a mistake to overlook the underlying social system of commoning which conditions the practice of file-sharing. To understand the antagonism between commodification and commoning in the context of file-sharing we are required to investigate the logic of each social system—including the political economy which informs the activities of content-producers and communication industries and the moral economy which informs the activities of peer-to-peer file-sharers. That is to say that an analysis must be made of the historical development of the competing conceptualizations for the structuring of social relations. This is not a history in which some previous, more authentic form is displaced or appropriated by capitalism as commodification pushes out commoning. Nor is this a history of revolutionary social practices explicitly designed to overthrow the existing social relations of capital. At times these competing forms of social relations have intermingled and co-existed; at other times they have come into open conflict. And despite the recent historical predominance of social relations predicated on the capitalist logic of accumulation, the social relations of commoning have always existed as potentialities or openings—even when it appeared that the only allowable or possible social relations were those of capital.

The antagonism between the commoning and commodification of information is grounded in a long and complex history which predates the current conflicts over peer-to-peer file-sharing. The purpose of the current chapter is to survey that history with an eye to contextualizing the belief systems of the file-sharers detailed later in this dissertation. Bearing in mind that structures are the rules and resources organized as properties of

social systems, it is necessary to show where commodification and commoning are structurally divergent. Therefore, this chapter begins with an overview of the structural dimensions of the social system of contemporary mass media and the social system of digital commoners. This is followed by an analysis of the development of the U.S. music industry in which I emphasize how the structural dimensions of signification, domination, and legitimation are implicated in the reproduction of the social system of commodification. In short, this section demonstrates how the music industry has attempted to bring the circulation of informational and cultural goods within the logic of accumulation through a steady increase in the scope and duration of intellectual property rights. The music industry has played a pivotal role in the historical development of copyright law and the economic development of the production and distribution of informational and cultural goods. The second half of the chapter is devoted to an historical overview of the structural development of peer-based communication on the Internet. Specific attention is given to the structural displacement of the peer-based model of communication by the client/server model. This is followed by an analysis of the technical and legal dimensions of the emergence of peer-to-peer file-sharing systems like the Napster, Gnutella, and FastTrack networks.²⁵

ECONOMICS OF MASS MEDIA

The current economic landscape of the mass media is characterized by the dominance of a relatively small number of very large and powerful media conglomerates.

²⁵ Because the BitTorrent protocol did not feature significantly in the RIAA litigation campaign, it is not considered in detail here. Chapter 6 considers recent technological and legal developments with BitTorrent.

Croteau and Hoynes (2001) have identified four broad developments in the structural trends of the media industry since the 1980s which have precipitated the current economic landscape. First, firms have experienced growth as major media corporations have been caught up in a wave of mergers and acquisitions beginning in the mid-1980s. Second, there has been horizontal and vertical integration as firms have moved into various media platforms and strata of economic production. Third, corporations have pursued a program of globalization to exploit economies of scale and expand sales into secondary and overseas markets. And finally, there has been an increase in the concentration of ownership as single firms acquire more and more holdings within a market. The upshot of these trends is a 21st century media market characterized by oligopoly.²⁶ For example, the U.S. motion picture industry is dominated by six corporations which account for over 90 percent of the industry's revenues. Likewise, the U.S. music industry is dominated by four corporations which account for almost 90 percent of all music sales (McChesney, 2004). Moreover, that sector of the U.S. economy dedicated to the production of copyrighted entertainment commodities has become increasingly vital to the overall economy. The RIAA states that based upon U.S. Department of Commerce statistics, the copyright industries account for six percent of the nation's GDP (Bender & Wang, 2009). The International Intellectual Property Alliance (IIPA)²⁷ found that between 2004 and 2007 the real growth rates of the core

²⁶ In fact, the motion picture and music industries have been characterized by oligopoly for most of the 20th century.

²⁷ The IIPA is an alliance of trade associations representing various copyright industries in the United States.

copyright industries²⁸ were more than twice that achieved by the U.S. economy as a whole, accounting for \$889.1 billion dollars, or 6.44% of the U.S. GDP in 2007 ("IIPA's New Economic Study Reveals the Copyright Industries Remain a Critical Driving Force in the U.S. Economy," 2009).

All four of the broad economic developments in the media landscape cited by Croteau and Hoynes (2001)—growth, integration, globalization, and concentration—are reflective of a desire on the part of capital to stabilize markets in entertainment commodities. Critics of these economic developments have pointed to the deleterious effects on consumer choice and the diversity of voices in the media landscape (McChesney, 2004). Yet other scholars have argued that the large size of these firms and the concentration in ownership has not reduced the variety of entertainment commodities available to consumers (Compaine, 2004; Hull, 2004). Mainstream economists often point to the plethora of available media outlets as evidence of a robust marketplace with plenty of everything for everyone. Critics of this perspective have responded that an increased number of media outlets does not necessarily correspond with diversity. For example, Croteau and Hoynes (2001) emphasize that “More content does not necessarily mean different content” (p. 81). Likewise, Bagdikian (2000) acknowledges the large number of media outlets but argues that the “large numbers deepen the problem of excessively concentrated control” as “each owner controls ever more formidable communications power” (p. 222).

²⁸ IIPA defines the “core” industries are those copyright-related industries whose primary purpose is to produce and/or distribute copyright materials.

A firm's decision to pursue a strategy of growth through mergers and acquisitions represents an exodus from intra-firm relations premised on market competition. In theory, the movement is away from a market characterized by perfect competition in which no firm is large enough to independently affect prices in any meaningful way and toward a market characterized by monopoly in which there is a single producer of a good with no other firms producing close substitutes. This affords the sole producer considerable control over pricing. In practice however, most real world markets (including those for entertainment commodities) are instead subject to imperfect competition—neither perfectly competitive nor monopolistic (Samuelson, 1964). A strategy of growth through the accumulation of market share therefore reflects an attempt to move toward the monopoly end of the spectrum in order to avoid the coercive forces of competition. Once a sufficient market share is achieved, the firm is less susceptible to the coercive exercise of power by both competing firms and labor, giving it greater leverage over the rate of capital accumulation.²⁹ This is the position advanced by Noam (2006) who argues that the communication industries underwent economic concentration around the time of the Telecommunications Act of 1996. Many of these firms initiated a series of acquisitions and mergers to re-stabilize markets after deregulation decreased barriers to entry.

Growth through acquisitions and mergers is often part of a larger strategy in which a firm attempts to become more horizontally and vertically integrated in the hopes of reaching new markets and achieving greater efficiencies in production. Doyle (2002) explains that “A horizontal merger occurs when two firms at the same stage in the supply chain or who are engaged in the same activity combine forces” (p. 22). Horizontal

²⁹ Here the rate of capital accumulation simply refers to the proportion of surplus value realized by capital.

integration allows a firm to increase its market share and obtain economies of scale. In the media industry this desire to exploit economies of scale has produced an explosion in media outlets as firms expand into secondary and foreign markets. These secondary markets allow firms to reach larger audiences and generate more revenue. Most of the large media conglomerates are transnational corporations which operate internationally through a decentralized management structure.

Conversely, Doyle (2002) explains the logic behind vertical integration as a desire to control a supply chain in which:

...the activities of an industry are ordered in a sequence which starts 'upstream' at the early stages in the production process, works its way through succeeding or 'downstream' stages where the product is processed and refined, and finishes up as it is supplied or sold to the customer. (18)

A firm's desire for increased market share drives it to expand into other stages of the production process. Vertical integration insulates incumbent industries from competitive forces by raising the barriers to entry. Negotiating deals with outside companies at every stage in the supply chain causes firms to incur higher transactions costs. For example, the ability of large motion picture companies to capitalize on the lowered transaction costs associated with ownership of the entire vertical supply chain (from studio facilities to exhibition outlets such as theatres or television channels) puts smaller independent motion picture companies at a tremendous disadvantage. This amounts to an exodus of capital from the coercive forces of competition. A vertically integrated firm can allocate resources internally and apart from typical market relations (Coase, 1993). In much the

same way as people engaging in class struggle sometimes opt out of the social relations of capital, firms engage in an exodus from market relations by withdrawing from the marketplace and establishing their own internal systems of resource allocation. Individual firms often find competition inefficient and incompatible with their own program of accumulation and opt instead for direct control over the means of production and distribution. In this sense individual firms contribute to a structural order of domination in which allocative resources (fixed capital) and authoritative resources (variable capital) are mobilized in such a way as to bring the material and social world within the capitalist logic of accumulation.

Yet as much as vertical integration is testament to the unprecedented control of large media conglomerates over the mode of information production and their ability to insulate themselves from the coercive forces of competition, it is simultaneously a sign of their vulnerability to disruption. Every point along the vertical supply chain is dependent on the proper functioning of all the other stages. For example, the successful delivery of a motion picture DVD to an audience is dependent on control over the physical distribution of the DVD, the manufacture of the DVDs, the production of the content, and the procurement of the necessary financing to cover the production budget. If there is disruption at any one of these stages the entire flow is threatened. Doyle (2002) emphasizes the potential threat to a media company that would arise should a competing firm gain control over all the substitute inputs or facilities at a point upstream in the integrated flow. The threat to the company is equally grave if labor or even audiences leverage control at any stage in this flow. That is to say, it doesn't necessarily take a

competing firm to create a disruption. Intellectual property law acts as the cement which holds the entire chain together. Should the means of information production and distribution become dispersed throughout society and the laws which govern information commodities become unable to keep pace with these technological developments, then the ability of a company to control the processes of production becomes indeterminate. Such is the disruptive potential of peer-to-peer technologies.

ECONOMICS OF PEER-TO-PEER SYSTEMS

The notion that peer-to-peer file-sharing has been disruptive to the existing business models of the entertainment industries is a widely held sentiment among both academics and members of the business community (Bainwol, 2009; Pouwelse, Garbacki, Epema, & Sips, 2008). Yet as Vaidhyathan (2003) reminds us, the conflict over peer-to-peer file-sharing is about much more than movies and songs. Rather, peer-to-peer communication has altered the basis of exchange for social relations, cultural production, and political activity. Madden (2009) asserts that the repercussions of peer-to-peer file-sharing extend far beyond the motion picture and music industries:

...patients are sharing peer-to-peer expertise on coping with medical conditions and are engaged in efforts to gain free access to vaulted personal health records, citizens are networking to increase oversight of politicians and are demanding unfettered access to government data. Even online daters—one of the few segments of the internet universe willing to pay at the gates of the walled garden—are circumventing the paid services and connecting directly via free social networking sites. (5)

While the disintermediation made possible by contemporary peer-to-peer systems may appear novel or revolutionary, it is important to bear in mind that all technological advances are accommodated by pre-existing social formations (Winston, 1998).

Vaidhyathan (2003) acknowledges the long history of peer-to-peer communication by stating:

This is very old. What we call p2p communicative networks actually reflect and amplify—revise and extend—an old ideology or cultural habit. Electronic peer-to-peer systems like Gnutella merely simulates [sic] other, more familiar forms of unmediated, uncensorable, irresponsible, troublesome speech; for example, anti-royal gossip before the French Revolution, trading cassette tapes among youth subcultures such as punk or rap, or the distribution of illicit Islamist cassette tapes through the streets and bazaars of Cairo. (4)

In other words, peer-to-peer file-sharing is grounded in previous moral economies. Our understanding of the contemporary conflict over peer-to-peer file-sharing may be enhanced by an investigation of the values and ideas which have accommodated previous technological advances in peer-based communications like ham radio or electronic bulletin board systems. Though a detailed examination of peer-based communication is beyond the scope of the current study, a brief overview of the salient trends in the peer-based technologies of the Internet is warranted. Such an investigation requires that we acknowledge where peer-to-peer networks, when considered as technologies-in-practice, have facilitated both commoning and commodification.

Peer-to-peer file-sharing is informed by moral economies which predate digitalization. As with contemporary peer-to-peer systems, the technological predecessors of current file-sharing systems were often characterized as piracy. This is a misleading metaphor at best. Seafaring pirates stole in order to sell their spoils while peer-to-peer file-sharers share cultural artifacts. That being said, even if one was to accept this metaphor, a distinction must still be drawn between commercial piracy and domestic piracy. Whereas commercial piracy may take the form of back alley shops churning out pirated copies of DVDs for sale on the black market, domestic copying rarely results in economic exchange. And as Johns (2009) argues, the initial emergence of domestic copying “terrified the culture industries in their formative years of the mid-twentieth century more than prior piracies” not because it resulted in black markets full of substitutable goods, but “because it implied a radical decentralization of cultural production” (p. 432). Johns traces these early instances of domestic copying back to the introduction of magnetic tape in the 1940s and the appearance of small fan communities of jazz and opera aficionados. These amateur connoisseurs of music quickly came into conflict with the recording industry because of their conflicting sets of values. The record labels saw music as a means to the realization of profit while fans saw themselves as the stewards of precious cultural artifacts. The uneasy relation between capitalism and art drove these dedicated fan communities to begin home copying as a means to keep culturally valuable yet commercially unprofitable music in circulation long after the record labels had lost interest in producing new copies while remaining disinclined to relinquish monopoly control over their intellectual properties. By 1982 the recording

industry estimated its losses due to home copying enabled by magnetic tape at \$2.85 billion per year, with \$1.13 billion coming from copying of content already owned by the individual copier and the rest coming from the copying of content borrowed from other sources (Hull, 2004).

While the moral economy of contemporary peer-to-peer file-sharing can be seen in these early instances of home copying, it has also been informed by the values and ideas of the digerati and hacker communities. These groups advocated belief systems premised on sharing, access to information, and technological/scientific progress. Again Johns (2009) traces the origins of the moral economy of the early Internet pioneers back to an era pre-dating digitalization when radio amateurs still inhabited the electromagnetic spectrum and “phreakers” exploited the telephone network for their own amusement. Each of these groups constituted self-conscious communities that came into legal conflict with the radio and telephone trusts. Johns describes values and ideas inherited by early computer hackers thusly:

At a time when computers were still largely the preserve of specialist technicians, these young virtuosi held a basic commitment to direct “hands-on” experience in order to produce their hacks. Emulating the communities of radio amateurs and phone experimenters, they insisted on the importance of freedom to engage directly with the technology itself. Accessing technologies and sharing the resulting knowledge was in their view essential for technical and even social progress. (474)

But it would also be a mistake to simply equate the interests of the digerati with those of peer-to-peer file-sharers. As Barbrook and Cameron (2001) have argued, the development of the Internet has been informed by the competing visions of both the anti-corporate do-it yourself (DIY) cultures of the New Left and the libertarian free market utopianism of the New Right. These authors have referred to this as the “Californian Ideology” which “...simultaneously reflects the disciplines of market economics and the freedom of hippie artisanship” and is “...made possible only through a nearly universal belief in technological determinism” (p. 367). Barbrook and Cameron assert that the rhetoric of free markets, uninhibited flows of information, and inevitable technological progress functioned to obscure the gift economies of amateurs and hobbyists which were also a precondition for the eventual corporate takeover and restructuring of the Internet. For these reasons we cannot cleanly equate the re-emergence of peer-based communication in the form of contemporary file-sharing applications with resistance to capitalism. The interests of CEOs and software developers are not necessarily those of peer-to-peer file shares. The current crop of peer-to-peer file-sharers is made up of not just the digerati, but everyday people whose daily concerns may have very little to do with notions of scientific and technological progress or industrial restructuring. Many peer-to-peer file-sharers possess a limited technical proficiency which extends little further than their ability to interact with the client software.

The commitment to free flows of information is common among those individuals who design and market peer-to-peer file-sharing platforms. Generally speaking, the anti-incumbents of industrial restructuring tend to favor unfettered access to information as a

matter of market entry. However, the commitment of peer-to-peer file-sharers to the free flow of cultural artifacts is not derived from the coercive forces of capitalist competition but from the antagonistic social relation of capital. On the one hand, the digerati seek unhindered access to free flows of information in order to keep economic input costs low and to accelerate the capitalist logic of production. On the other hand, peer-to-peer file-sharers seek unhindered access to free flows of information to lower the transaction costs of noncommercial production and distribution of informational and cultural artifacts.

Benkler (2006) argues that recent technological developments have enhanced the autonomy of individuals to engage in peer production, to do more for and by themselves, and in loose commonality with others—outside of the market sphere. Generally speaking, Benkler defines autonomy as “the relative capacity of individuals to be the authors of their lives” within the constraints imposed by physical and social circumstances (p. 141). Benkler’s networked information economy therefore represents the emergence of a “new set of technical, economic, social, and institutional relations” which facilitate greater levels of individual autonomy (p. 130). Benkler is describing the structural dimensions of the moral economy of peer-to-peer file-sharing. However, the capacity to actively participate in the authoring and distribution of culture is often a goal of both anti-incumbent firms and peer-to-peer file-sharers, although the shared objective is purely accidental. The interests of upstart capitalists are only aligned with peer-to-peer file-sharers to the extent that they can exploit the moral economy of file-sharers for profit. As we will see shortly, the historical tendency for successful anti-incumbent firms is to raise

the barriers to entry and push for strengthened intellectual property protections once they have achieved sufficient market share.

CONFLICTING RATIONALES

The conflict between the social systems of commodification and commoning emerges from the latter's emphasis on greater levels of autonomy in the processes of cultural production and distribution and the former's drive to harness that creativity for the purpose of increasing the rate of capital accumulation. The traditional economic model adopted by the mass media required that media products be constructed as finished goods meant solely for consumption by paying customers (Fiske, 2004). Information commodities were constructed as finished goods even though the mass media blatantly relied on the unacknowledged labor of audiences who actively interpreted and circulated the messages they received from the culture industries. Today new spaces have been opened for active engagement with information commodities where people reappropriate, remix, transform, and redistribute cultural artifacts. There is more structural flexibility today than in previous periods. In fact, capital has demonstrated considerable success in harnessing the creativity of these cooperative social arrangements. But the free labor of audiences always includes an explosive tendency towards ever greater levels of autonomy which in turn compel capitalists to exert considerable coercive power to circumscribe the entire process within the logic of accumulation.

Because media artifacts are by nature cultural goods the process of commodifying them requires a fairly complex and contingent set of structures. Doyle (2002) states:

Feature films, television broadcasts, books and music are not merely commercial products but may also be appreciated for the ways they enrich our cultural environment. Many cultural goods share the quality that their value for consumers is tied up with the information or messages they convey, rather than with the material carrier of that information (the radio spectrum, CD, etc.). Messages and meanings are, of course, intangible. So media content is not 'consumable' in the purest sense of this term. (12)

Cultural goods are often public goods with extremely low marginal costs.³⁰ The essential value derived from these goods is not tangible and is not used up during consumption. This in turn means that it is sometimes very difficult to exclude people from these goods. The inability of firms to control the use of public goods then speaks to the difficulty of harnessing the free labor of audiences in a way which is consistent with the capitalist mode of production. That is to say, in the context of media commodities, the failure to control public goods is the failure of capitalists to convert the leisure activity of the working class into unwaged work.

It is absolutely critical for the entertainment industries to ensure the continued alienation of cultural goods from consumers because the failure to do so is a failure to constitute the working class as a consumer class. And though in the past various technological advances have occasionally threatened the ability of these industries to extract a price in exchange for access to cultural goods, industrial restructuring has thus far prevented these potential crises from toppling the system. Yet the combination of

³⁰ Marginal cost for media firms refers to the cost of supplying a media good or service to one extra customer.

digitalization and networking represent an unprecedented challenge for the entertainment industries (Doyle, 2002). To better understand this challenge I now turn to the historical development of the music industry to show how it reacted to previous encounters with technological development and crises of control.

THE U.S. MUSIC INDUSTRY

What people commonly refer to as the music industry is actually composed of three distinct though interrelated types of business: the recording business, the publishing business, and the live performance business. In the discussion that follows, all three aspects of the music industry will be addressed with particular attention given to the recording and publishing components. The intention of the following section is to demonstrate how the historical development of the industry and related technology has been conditioned by the economic imperative to commodify informational and cultural goods on the one hand and resistance to those processes on the other. Following Hull's (2004) example, we can divide the historical survey of the music industry into five periods. First was the period in the second half of the 19th century during which the pertinent technologies emerged. This was followed by a period during which the 1909 Copyright Act helped lay the foundation for the commercialization of music production. The next period saw the near death and rebirth of the industry as it passed through the Great Depression and into the postwar period. Then in the mid-1950s the emergence of Rock and Roll dramatically transformed music into a mass industry. And finally with the introduction of the compact disc in 1982, the music industry enjoyed a period of unparalleled economic success for almost two decades before the advent of new

communication technologies and practices eventually challenged the industry's hegemonic position.

Origins of the U.S. Music Industry

The origins of the recording industry can be traced back to Thomas Edison who in 1877 introduced a cylindrical prototype of the modern phonograph. According to Starr (2004), Edison initially envisioned his “talking machine” as serving both entertainment and business needs. But after a brief surge of interest a stable market failed to materialize. The technology lay dormant during the remainder of Edison's initial patent. Things changed in 1887 when a former associate of Bell Telephone, Emile Berliner, improved upon the device's original design by replacing Edison's horizontal cylinder with the more familiar platter or disc. As Hull (2004) notes, Berliner's “music machine” improved upon Edison's “talking machine” primarily by making it vastly easier to make copies of the original recordings, “...thereby opening up much greater possibility for a mass-produced item for the general population” (p. 17). Berliner's business, the Berliner Gramophone Company, would give rise to the famous Victor Talking Machine Company in 1901.³¹ Not to be undone by his competition, Edison improved upon his own design in 1888, still expecting the device to be used primarily by businessmen for dictation. His improved device soon found a market as an entertainment medium though in a manner similar to the kinetoscope. As Starr (2004) explains, by 1890 Edison's phonograph “was enjoying a wave of popularity” (p. 299) as an early coin-in-the-slot prototype of the modern day

³¹ The Victor recording label was eventually acquired by RCA in 1929.

jukebox in hotel lobbies, train stations, and storefront parlors which would later be home to Edison's kinetoscopes.

Edison began offering his cylinders for sale to the public as early as 1889. In the 1890s cylinder recordings were sold primarily via mail order directly from the record label.³² But as the century came to a close the price of phonographs dipped and people began purchasing them for domestic entertainment. Increased sales of phonographs in turn stimulated sales for recorded music. In 1895 the first brick and mortar record store opened its doors in Philadelphia. By 1899 sales of phonorecords (both cylinders and platters) had reached an estimated annual rate of 3,750,000 units. Within ten years the estimated annual sales of phonorecords increased by more than sevenfold to 27,500,000 with over 1.3 million phonographs sold (Hull, 2004). Moreover, by the close of the first decade of the 20th century the recording industry could already be characterized as an oligopoly as just three firms enjoyed a powerful patent monopoly over recording and playback technology—Edison, Victor, and Columbia. However, these three labels would see their patent monopolies come to a close in 1917 at which point other labels began to emerge.

At the turn of the 20th century the music publishing industry was also selling millions of copies of sheet music. According to Hull (2004), at the close of the first decade of the 20th century publishers could potentially sell as many as two million sheet music copies of a hit song. “Even though sound recordings were catching on in 1920 and accounted for about \$3 million dollars of publishing revenue, sheet music sales still

³² *Record label* refers to a company whose brand and trademark is used as part of the manufacture, distribution, and promotion of recorded music performances.

accounted for more than \$16 million, about 88 percent, of publishing income” (p. 70). This was the legendary period of Tin Pan Alley—the name given to the concentration of publishers in New York City at the turn of the century. Hundreds of small publishers would ride a wave of commercial success as vaudeville thrived and the public became obsessed with popular music. Not until the Great Depression would music publishers see their sales decline as the recording industry eclipsed and eventually dwarfed the publishing industry. It is worth noting that at this point in the history of the music industry a substantial component of its economic fortunes was premised on amateur performance. Everyday people performed their own renditions of popular songs while seated at pianos surrounded by friends and family. In this sense there is considerable continuity between the consumers of published music in the early years of the 20th century and the Remix culture of the 21st century as both groups actively engage(d) with cultural artifacts through appropriation, transformation, production, and distribution.

The Copyright Act of 1909 helped to lay the foundation for the development of a commercial music industry both by establishing copyright in the mechanical reproduction of music and by creating a statutory limit to the royalties owed by recording companies to publishing companies. Significantly, the 1909 Act did not establish copyright in recorded music—something that would not be instituted until 1972. Although the publishing industry was still considerably larger than the recording industry in 1909, the recording industry had become large enough that it began to draw the ire of publishers whose revenue depended on the sale of licenses for access to their catalog of compositions. As is the case in many burgeoning industries the anti-incumbent firms of the music industry

were resistant to intellectual property regimes. Specifically, the record labels were initially resistant to the expansion of copyright to the music business as they realized the cost of negotiating individual licenses with publishers could dramatically increase their input costs. Therefore, the 1909 revision to the Copyright Act sought to secure the position of both publishers and labels by giving the mechanical right to publishers while simultaneously constraining publishers' control over the labels' input costs by subjecting the establishment of rights in mechanical recordings to a system of compulsory licensing.³³ Consequently, by the end of the 1920s the music industry had become a relatively stable business with annual sales of about \$75 million (Hull, 2004). In essence the 1909 revision attempted to dampen the impact on the publishing industry while facilitating an orderly restructuring of music consumption in the home to recorded music.

The early stabilization of the industry was nearly derailed during the Great Depression of the 1930s. As the twenties came to a close, another interested party emerged to potentially affect the course of the music industry—broadcasters. The intervening years between the passage of the Radio Act of 1927 and the Communications Act of 1934 were witness to a period of struggle in which the nascent commercial broadcasting industry took control of the electromagnetic spectrum (McChesney, 1993). Unsurprisingly, the broadcasting industry was also initially resistant to the establishment of copyright in recorded music since this would potentially increase their own input costs. Furthermore, and with little hint of irony, the record companies themselves made an unsuccessful attempt to petition the courts to prevent broadcasters from playing their

³³ After having licensed the initial use of a copyrighted work *compulsory licensing* compels the copyright holder to grant the further use of that copyrighted work to others provided they pay a statutory license fee or negotiated license fee.

records.³⁴ Still, as sheet music sales declined to a low of \$2 million in 1933 with the onset of the depression, performance revenues from broadcasting kept the publishing industry afloat throughout the economic downturn (Hull, 2004). In fact, publishing revenues from both radio play and jukeboxes would maintain publishers into the 1940s. Nevertheless, the publishing industry had entered into a period of long decline and would never fully regain their former position. By the mid 1950s publishers were looking for new sources of revenue as their sales declined in large part due to the displacement of the piano from the domestic sphere by radio and television.

The recording industry, on the other hand, with no equivalent revenue source like publishing rights, went through significant restructuring after retail sales of phonorecords plummeted in the 1930s. Edison Records closed down in 1929 after the initial market crash. In the same year Victor was bought out by the Radio Corporation of America (RCA) and became RCA Victor. Yet despite the occasional shuffling of top tier companies, the recording industry remained an oligopoly well into the 1950s. The postwar period saw a dramatic increase in consumer spending which stimulated sales of radios, televisions, phonographs, and records. According to Hull (2004), sales of playback equipment and recordings grew from \$5.5 million in 1933 to \$189 million in 1950.

The return of a stable market for the recording industry in the post-war period was accompanied by various technological improvements including the 45-rpm single, the LP (long play) record, and later stereophonic sound. These technological advances presented a challenge to the recording industry in terms of standardization. In order to confront

³⁴ See *Whiteman and RCA vs. WBO Broadcasting*, 114 F.2d 86 (2d Cir. 1940).

these technical issues the Recording Industry Association of America (RIAA) was established in 1952 ostensibly to administer specifications for the optimal playback of vinyl records. It is fair to say that the RIAA, like the Motion Picture Association of America (MPAA), was borne out of an attempt to standardize the content and delivery of information commodities free from government interference. And in a manner very reminiscent of the MPAA, after 1951-1952 the RIAA took an early and aggressive interest in promoting copyright for recorded music as a means of combating the forms of commercial piracy which had accompanied the technological development of reproduction and playback systems. Johns (2009) states:

The RIAA would both lobby for copyright and intervene in its own right to deter, prevent, and detect piracy....It hired its own agents, who operated largely outside public oversight or control, and used any legal tools it could think of. (444-445)

The emergence of rock and roll in 1955 forever changed the recording industry. During the early 1950s, new recording artists and new labels had emerged but did little to challenge the oligopolistic structure of the industry. The explosion in consumer demand in the wake of the birth of rock and roll however, brought about greater levels of competition as dozens of independent labels tried to keep pace with demand. Record sales increased sharply by 44 percent from 1955 to 1956 and the independent labels' chart share increased to 76 percent in 1958 (Hull, 2004). All told, record sales probably more than tripled in the years between 1950 and 1960. Although the sudden success of independent labels in the 1950s started to erode the oligopoly of the big record labels, the industry was soon transformed by large corporations into a mass medium characterized

by high levels of economic concentration and the modern branch distribution system.³⁵

As Hull (2004) observes, “By 1972 the top five labels controlled only 31.4 percent of the album charts, but the top five corporations controlled 58.2 percent of those charts” (p. 124).

Corporate control over the music industry would continue unabated during the 1980s. The introduction of the compact disc in 1982 proved to be an economic boon for the industry well into the 1990s. The phenomenal growth in CD sales was a product of both increased spending on new recording artists as well as catalog-replacement sales. But the industry ran afoul of the federal government in the mid-1990s when the FTC charged the largest record companies with conspiring to keep prices artificially high. In the years leading up to the accusation, intense price competition among retailers had caused the retail price of a CD to drop to as low as \$9.99 in many stores (Ghosemajumder, 2002). Alarmed by the dramatic drop in prices, the record companies began threatening to withhold co-op advertising money from retailers who advertised CDs for sale below a threshold price. As Hull (2004) explains:

If a retailer advertised the product for sale below that price, then the label might go so far as to stop all advertising funds for all product from the distributor for a period of time (WEA’s policy), or just cut off funds for that particular record (BMG’s policy). Theoretically the store could still sell a recording for less than

³⁵ According to Hull (2004), a “*Branch distributor* sells only the labels manufactured by its corporate owner or other labels that the parent company has agreed to distribute. The branch distribution companies are: WEA (Warner Music Group), UMVD (Vivendi-Universal), Sony Distribution (Sony Music Entertainment), BMG Distribution (Bertelsmann, AG), and EMD (EMI)” (p. 192).

the MAP³⁶, just not advertise that price using money that the label had provided.

(183)

The record industry insisted that the policy was meant to insulate smaller stores from unfair price competition by larger retail chains that often used low-priced CDs as a loss leader to stimulate sales of other merchandise. Unconvinced, the FTC issued an order against the big five record labels—Time Warner, Sony, Bertelsmann, EMI, and Universal—for violating antitrust law. It was estimated that these companies, which controlled 85% of the recording industry's \$13.7 billion in domestic sales, had extracted approximately \$500 million in illegal earnings over a four year period (Croteau & Hoynes, 2001; Ghosemajumder, 2002).

The political and deregulatory climate of the 1980s and 1990s had favored mergers and acquisitions among media corporations. It was during this period toward the end of the 20th century when the current media and entertainment conglomerates began to exhibit high levels of growth and economic concentration. By the turn of the 21st century the big five record companies which had been targeted by the FTC for anticompetitive practices distributed 95% of all music carried by record stores in the U.S. (Croteau & Hoynes, 2001). Domestic sales of recorded music topped \$14.3 billion in the year 2000 (Hull, 2004). And despite the incredible volume of domestic sales, none of these companies were actually based in the United States.³⁷ Moreover, the major record labels accounted for 70% of worldwide music sales between 1997 and 2001 (Hull, 2004).

³⁶ Minimum advertised price.

³⁷ Warner Music Group was owned by Canadian AOL-Time Warner; Universal Music Group was owned by French Vivendi Universal SA; Sony-BMG was jointly owned by the Japanese Sony Corporation and the German Bertelsmann, A.G. EMI Ltd. was based out of the United Kingdom.

Currently, the music industry exhibits high levels of economic concentration and vertical integration in all three of its component areas—recording, publishing, and live performance. Despite the relatively high number of recording labels, almost all of the independent labels are distributed by a branch of one of the majors. In terms of publishing, each label typically has its own affiliated publishing company. The three largest music publishers are themselves part of three of the largest recording conglomerates—EMI, Warner, and Universal. And though the live performance component of the music industry is not given explicit consideration here, there is considerable horizontal and vertical integration in this area as well.³⁸

Economics of the Music Industry

Major music companies are now subsumed within the structure of large media conglomerates. Typically, these media conglomerates hold interests in various media markets such as motion pictures, television, video games, book and magazine publishing, and consumer electronics. A conglomerate's music division is usually further subdivided into publishing companies and record companies. Each of these units earns rents from copyrights in composition and recordings respectively. The record division can be further subdivided into recording, manufacturing, and distribution companies. The record labels are often branded and marketed as companies with separate identities from the parent corporation. Typically, the manufacturing arm is charged with manufacturing for all of the conglomerates' record labels. The distribution company usually distributes all of the

³⁸ Polygram, CBS Records, and MCA Records have all entered into the promotion business to varying degrees.

conglomerate's labels and even contracts with additional independent labels desiring distribution. Broadly speaking this system typifies the model of vertical integration.

As Hull (2004) explains, there are three revenue streams which make up the economic model of the music industry. Typically income can be derived from the utilization, recording, and performance of a song. These three sources of income correspond with the music publishing, music recording, and live entertainment industries. Although Hull rightly includes the live performance component as part of the economic model for the music industry, the focus here is on publishing and recording since they are more closely related to the conflicts occurring as a result of the practice of peer-to-peer file-sharing. The publishing revenue stream begins when a songwriter, musician, or band writes a song. Once a publishing company acquires the rights to the song, the publisher can generate income by licensing the use of that song in recordings, broadcast, sheet music, and various other adaptations. The recording revenue stream typically begins when a recording artist or artists sign a contract with a record label to record a song or songs. The master recording is then sent to the manufacturer where a given number of copies are assembled for sale. The distributor supplies the finished product to retailers who markup the wholesale price and make the recording available for sale to the public.

Copyright and the Music Industry

The relationship between copyright law and the music industry differs in some fundamental respects from other industries like motion pictures. To understand these differences, it is useful to review in brief the development of some of the core tenants of copyright law. As Litman (2006) cautions, it is not very instructive to equate copyright

with notions of absolute rights of property. The actual “bundle” of rights which comprise copyright protections has been a product of complex interactions among industries, governments, academics, lawyers, writers, musicians, and everyday people. Scholars of copyright often stress that copyright generally amounts to a grant of monopoly control for a limited duration to private interests for the purpose of providing an economic incentive for the production of informational and cultural goods in exchange for universal public access to those goods once the duration of exclusive control has expired. The Copyright Act of 1790 set the original duration of copyright protection at 14 years with the possibility for an additional 14 year renewal. As for the composition of the “bundle” of rights, Vaidhyanathan (2001) explains that it includes:

...the exclusive right to make copies, authorize others to make copies, create derivative works such as translations and displays in other media, sell the work, perform the work publicly, and petition a court for relief in case others infringe on any of these rights. (20-21)

These rights can be transferred if one party decides to contract with another. The Copyright Act of 1976 stipulated that creative works are vested with protection the moment they are fixed in a tangible medium of expression. The 1976 Act also stipulated that the duration of copyright protection would be extended to the life of the author plus fifty years. This duration was again extended to the life of the author plus 70 years³⁹ with passage of the 1998 Sonny Bono Copyright Term Extension Act.

In contrast to other categories of creative works, when analyzing recorded music one must give consideration to both copyrights in composition and in mechanical

³⁹ For a discussion of *corporate authorship* see paragraph on the Copyright Act of 1909 below.

reproduction. The composition rights to songs are often transferred to publishers who then license the various utilizations of the song or songs. These uses may include radio and jukebox play, public performance—even a license to record the song. The mechanical right covers the right to reproduce recorded performances of songs. Significantly, copyrights in recorded music were not recognized until 1972 whereas motion pictures, for example, have enjoyed copyright protection since 1912.

The Copyright Act of 1909 is remembered primarily for doubling the duration of copyright terms from 14 to 28 years (renewable for another 28 years) and for extending copyright to mechanical reproductions. However Vaidyanathan (2001) argues that perhaps the most significant change was the creation of a new definition of *corporate authorship*. This was particularly significant for the recording industry as most recorded music is authored and released as works “made for hire” (Hull, 2004). That is to say, most commercially recorded music is created as the intellectual property of the record label which signs the artists to a recording contract. A couple of interesting developments for music commodities flow from this change in the law. First, since corporations do not have a lifespan analogous to a human author, the duration of copyright protection is longer for corporations—95 years from the initial release or 120 years from the initial recording, whichever ends first. However, since the composition copyright is usually established by an individual author or songwriter, the composition and recording copyrights will likely not expire at the same time. Second, since the recording copyright is typically owned by the record label as a “work for hire”, the recording artist or artists do not enjoy any termination rights. Termination rights were established under the 1976

Copyright Act allowing authors to terminate transfers of copyright so that they or their heirs could recapture the copyright after a period of time. As Hull (2004) explains:

The theory is that when authors initially bargain away their copyrights for long periods of time, the value of the copyrights is not known because they have not stood the test of the marketplace, and for that reason beginner authors are not in a very good bargaining position with publishers and labels. (39)

Under current law, musicians are generally unable to recapture the value of their recorded performances while the record companies are entitled to capture rents from these recorded performances for the entire duration of the copyright term.

An important limitation of copyrights in mechanical reproduction is the compulsory license system established by the Copyright Act of 1909. Both pianola manufacturers and record labels were resistant to the idea of negotiating individual licenses for particular songs from music publishers and petitioned Congress to establish a compromise licensing system. The resulting compulsory licensing system stipulated that once the holder of a copyright for a particular musical composition has licensed another party to make a mechanical reproduction of that song, then other parties that also wish to record the same song may do so provided that they too compensate the holder of the composition copyright. Congress established a statutory rate for these compulsory licenses which has been adjusted at various points over the years. Compulsory license fees are collected by an affiliate of the RIAA called Sound Exchange. As long as the publishers receive payment either at the statutory rate or a negotiated rate, they cannot petition the government to prohibit the sale of the reproductions.

Recorded music is subject to yet another limitation in that recordings are not in the list of works for which copyright law affords protections to public performance and public display. Copyright law narrowly confines the protection of recorded music to reproduction, distribution, and derivative works. The inability of the recording companies to secure these performance rights has been the result of intense opposition from the broadcasting industry. The broadcast of recorded music generally only activates copyrights in composition, which accounts for part of the interest record labels have in starting their own in-house publishing companies. The recording industry did eventually manage to secure some very limited rights to public performance of recorded music over the Internet. Copyright protection was expanded to include the right to control the performance of recorded music in digital audio transmissions as part of the Digital Performance Right in Sound Recordings Act of 1995. But this act exempted traditional broadcasters by applying only to digital transmissions that were not over the air for use by radio and television broadcasters. As Hull (2004) explains, “Streaming by Webcasters, interactive music services, and background music services are subject to licensing. Noninteractive services, such as most Webcasters, is subject to a compulsory license, but interactive services must negotiate directly with the record companies for rights” (p. 54).

One final difference in the relation between copyright law and the music industry is the limited application of the doctrine of first sale. As Litman (2006) explains, the doctrine of first sale states that a “...copyright owner has no right to control the distribution of a copy of a work after she has sold that copy. The buyer can keep it, loan it, rent it, display it, or resell it to others” (p. 17). However, with regard to recorded music

commodities, the purchaser can resell but not rent the item. Rental of sound recordings is specifically prohibited in the Record Rental Amendment of 1984. This limited application of the doctrine of first sale resulted when record companies petitioned Congress for protection from a practice which they felt abetted home copying and created a deleterious effect on sales. All of these examples—from the absence of termination rights to compulsory licensing to the limited application of the doctrine of first sale—demonstrate how copyright law has been shaped by the industry and policymakers to serve primarily the interests of the record labels. Contrary to any notion of some grand balance of interests between the public and private spheres, the relationship between copyright law and the music industry exposes the many ways in which the law has been expanded and strengthened to accommodate private interests. Moreover, the recurring adaptation of copyright law in the interest of improved commodification has only accelerated in the face of a rapidly changing technological environment.

New Threats to the Music Industry

As previously mentioned, it did not take long after the development of magnetic tape technology for the recording industry to sound the alarm about the threat of home copying. The RIAA quickly identified home copying as a bigger threat than commercial piracy and claimed revenue losses in the neighborhood of a billion dollars (Johns, 2009). The industry was equally alarmed when consumer digital recording equipment appeared on the market in the late 1980s. The recording companies feared that the perfect copies made possible by digital reproduction would lead to the unauthorized and uncontrollable circulation of countless copies of recorded music. The industry fought to prevent the

importation of these devices for fear of rampant piracy. Subsequently, Congress passed the Audio Home Recording Act (AHRA) in 1992. As Litman (2006) explains:

Protracted negotiations among record companies, composers, music publishers, performers, and consumer electronics manufacturers yielded a complex agreement ultimately enacted as the AHRA. In return for technical and monetary concessions, copyright owners agreed that they would abandon both their attempts to prevent the sale of digital recording devices and their controversial and unenforceable claims against consumers for private copying of recorded music. The law contains an explicit provision prohibiting suit against consumers for creating noncommercial digital or analog copies of musical recordings. In return, device manufacturers agreed to pay a royalty on every digital recording device or digital tape sold. The royalties were to be distributed among composers, music publishers, record companies, and performers, according to a formula that was both complex and maddeningly vague. (59-60)

The producers of blank digital audiotapes were required to pay a 3% royalty and the manufacturers of digital audio recorders were required to pay a 2% royalty. The act also required the incorporation of Serial Copy Management System controls in the manufacture of digital audio equipment to prevent consumers from making copies of copies. Despite the recording industry's legislative victory against the consumer electronics industry, the industry's initial problems with the replacement of analog with digital technology would be exacerbated a few short years later as increasing numbers of

people flocked to the Internet where digital music files were quickly becoming the common currency of exchange.

INTERNET COMMUNICATION MODELS

Common usage of the word Internet usually conveys something more than the purely technical definition of a global system of interconnected networks and the information transmission protocols which bind them together. The term can summon forth ideas concerning everything from commerce, participatory democracy, surveillance, community, identity theft, predation, to learning. There are so many ways of understanding the phenomenon it would be a fool's errand to try and pinpoint a singular moral economy of the Internet. It would be misleading to directly equate the Internet, when considered as a technology-in-practice, with the belief system informing the social system of commoning. While online gift economies certainly represent a particular vision of how the Internet should be implicated in social relations, competing visions have always existed alongside it. In the following section I attempt to map the historical development of the Internet in general and peer-based systems in particular and their intersections and divergences with the social system of commoning and the social system of commodification.

Scholars can point to shifts in the hegemonic ideas and values which have informed the development of the Internet. For example, Vaidhyathan (2003) alludes to the shift from an early Internet (which he refers to as Internet 1.0) to the ascendancy of another vision for the Internet (Internet 2.0) which was concomitant with the arrival of the World Wide Web in the mid 1990s. During the Internet 1.0 era a small number of

users with a high degree of technological proficiency, operating mainly out of universities and other research institutions, worked on large and expensive mainframe computers linked together through the early Domain Name System (DNS). The introduction of hypertext, graphical browsers, low-cost and relatively easy-to-use personal computers, marked the explosive beginnings of the Internet 2.0 era during which large numbers of people streamed onto the network.

This movement from one hegemonic vision of the Internet to another was representative of a change in social relations to the extent that, as DeSanctis and Poole (1994) say, "...technology presents an array of social structures for possible interpersonal interaction..." (p. 125). As people flooded onto the Internet in the 1990s, the social, technological, economic, and legal structures of the Internet were altered to accommodate enormous and sudden growth. As with the industrial restructurings of the music industry, particular interests would prevail in the restructuring of the Internet as it transitioned from early peer-to-peer systems to predominantly client/server⁴⁰ systems. More recently, peer-to-peer models have once again surfaced as different interests became dissatisfied with the client/server model for various reasons. These interests do not form a unified front in intent or purpose. In the pages that follow I will attempt to trace the major historical developments of the Internet as it moved from a peer-based to a client/server model. I will give particular attention to the interplay between technological, economic, and legal structures before attempting to show in the second half of this dissertation how the interaction of these structures are instantiated in practice of commoning.

⁴⁰ Taylor (2005) defines a *client* as "a consumer of information" and *server* as "a provider of information" (p. 4).

Peer-based Model

In the late 1950s the Department of Defense reacted to the successful launch by the Soviets of the Sputnik satellite by establishing a new agency called the Advanced Research Projects Agency (ARPA).⁴¹ The new agency was tasked with supplying the DoD with a continuous flow of technological options to help the Department adapt to the changing global environment. In 1969 the agency deployed the world's first functioning packet-switching network, ARPANET, with the general intent of allowing for the remote sharing of computing resources over a robust and decentralized network. The major obstacle which ARPA had to overcome was the creation of a common communications protocol recognizable by a variety of specialized networks and mainframe computers. As Minar and Hedlund (2001) observe:

The challenge for this effort was to integrate different kinds of existing networks as well as future technologies with one common network architecture that would allow every host to be an equal player. The first few hosts on the ARPANET—UCLA, SRI, UCSB, and the University of Utah—were already independent computing sites with equal status. The ARPANET connected them together not in a master/slave or client/server relationship, but rather as equal computing peers.

(4)

A key component of the Internet's early design therefore was the adoption of the protocol suite known as Transmission Control Protocol/Internet Protocol (TCP/IP). These common internetwork protocols made it possible for most networks to be connected

⁴¹ The agency was later renamed *DARPA* for Defense.

together regardless of their specific characteristics. Thus the Internet was originally designed as a peer-based system, or as the authors state, "...as a medium for communication for machines that share resources with each other as equals" (p. 4).

Goldsmith and Wu (2006) have emphasized that this early peer-to-peer system was unprecedented because it was open, minimalist, and neutral. They explain:

It was open, because it was willing to accept almost any kind of computer or network to join in one universal network-of-networks. IBM mainframes, AT&T networks, the U.S. Defense Department, and, eventually, personal computers could now all interconnect. It was minimalist, because it required very little of the computers that wanted to join. Becoming part of the Internet was like joining the Unitarian-Universalist church—the central dogma was not very demanding. Finally, it was neutral between applications. Some networks, like the telephone network, were specifically designed for a given purpose (in the case of the telephone network, talking). The Internet treated e-mail, downloads, and every other type of early application the same. This allowed new and better applications (like e-mail, the World Wide Web, and peer-to-peer technology) to evolve and replace the old. (23)

This early approach to Internet communication resulted in a near-universal adoption of the peer-based model.

As the number of hosts on the network began to grow into the thousands, the Domain Name System (DNS) was created to facilitate the sharing of data across the largely peer-to-peer Internet (Minar & Hedlund, 2001). Initially users circulated a text

file periodically which mapped domain names to IP addresses.⁴² However, with the sudden explosion in the number of hosts connected to the network the DNS evolved as a peer-based hierarchical naming system. IP address queries were first directed to the nearest name server. The queries were then directed further up the hierarchy, all the way to the root server, until the desired information was located. The answer to the query would then be sent back down the hierarchy of name servers to the original requestor, and was cached on each server along the way. In this way, each name server was updated as a part of the process, functioning both as a server and a client.

Client/Server Model

The success of this early peer-based system of internetworking protocols and information management also meant that the Internet itself quickly became an arena of struggle for the normative framing of the technology. The original open, minimal, and neutral design of the network allowed competing interests to populate the network and articulate their particular vision of how the structural features of the Internet should be ordered. Even the peer-based model which had made these competing articulations possible could be challenged. The peer system which was established as part of ARPANET was the dominant model of interworking until the advent of the World Wide Web in 1994. In the early years of the Internet, hosts were typically assumed to be connected to the network in a fairly predictable manner. They were assigned permanent IP addresses and coordinated by the original DNS system. With the sudden influx of

⁴² *IP address* or *Internet Protocol address* refers to the numerical identifier assigned to devices on a network using the Internet Protocol for communication between nodes.

people onto the Internet due to the combined success and popularity of hypertext, web browsers, and the availability of cheap dial-up modems and personal computers, early peer-based models were increasingly displaced by more centralized communication systems. As Taylor (2005) explains:

This created a second class of connectivity because PCs would enter and leave the network frequently and unpredictably. Further, because ISPs began to run out of IP addresses, they began to assign IP addresses dynamically for each session, giving each PC a different, possibly masked, IP address. This transient nature and instability prevented PCs from being assigned permanent DNS entries, and therefore prevented most PC users from hosting any data or network-facing applications locally. (24)

The decision by Internet Service Providers to periodically assign users new IP addresses (dynamic IP addressing) rather than permanent IP addresses (static IP addressing) was a significant development in the transition from a peer-based to a client/server model of the Internet. The original design of the Internet had not equipped the network to handle an unlimited number of IP addresses. The solution to this dilemma was therefore to ration IP addresses. Typically, an ISP assigns dynamic IP addresses through a Dynamic Host Configuration Protocol (DHCP) server. Although dynamic, these IP addresses do not necessarily change with each new session and are typically assigned for relatively long periods of time, simply renewing upon expiration. However, with regard to the large scale management of shared resources, the impact was considerable. The choice to go with dynamically assigned IP addresses meant that

existing systems of peer-based communication became untenable. What developed instead was a client/server model for resource management and distribution in which clients request services or content from servers. Taylor (2005) again explains:

In this architecture, clients connect to a server using a specific communications protocol (e.g., TCP) to obtain access to a specific resource. Most of the processing involved in delivering a service usually occurs on the servers, leaving the client relatively unburdened. Most popular Internet applications, including the World Wide Web, FTP, telnet, and email, use this service-delivery model. (29)

An advantage of the client/server model is that the computational requirements of the client are often negligible. But the server also becomes an unequal peer. That is to say that in the client/server model the personal computer of the home user does not share resources on the network in any substantial manner. The system becomes increasingly centralized as content and service provision is located on a relatively small number of large servers which administer resource to the rest of the network. As Vaidhyathan (2003) describes:

Thus began Internet 2.0, in which increasingly personal computers allowed their users to receive and consume information, but allowed limited ability to donate to the system. This extension of the network cut off personal computers from the server business. Most users donated information only through e-mail. And it became clear that while the internet once seemed like a grand bazaar of homemade goods and interesting (albeit often frightening) texts generated through

community dynamics, it would soon seem more like a shopping mall than a library or bazaar. (3)

REVIVAL OF PEER-TO-PEER

The desire to correct the imperfections of an early Internet which was not designed for commerce led to the development of technological structures which would facilitate centralized control and credentialed systems of limited access.⁴³ However, the displacement of early peer-based systems by client/server systems was complicated by the continual development of new peer-based systems. Individuals have used a variety of mediums over the years to share information commodities. Ghosemajumder (2002) explains that since the advent of the Internet people have transitioned from physical diskettes to a variety of online forums to share cultural and informational content. Early home computer owners set up Bulletin Board Systems (BBS) in the 1970s. Some of these BBSs were used to share business and entertainment software. As the peer-to-peer model was increasingly displaced by the client/server model many of these sharing activities were relocated to FTP⁴⁴ sites. Eventually, FTP sites were supplanted by the contemporary wave of peer-to-peer applications. These newer peer-to-peer systems were characterized by faster transfer speeds allowing for the sharing not just of software but music and motion pictures as well.

Scholars like Lessig (1999) and Benkler (2006) have written extensively on the deleterious effects of centralized systems of controlled access on everything from

⁴³ This has been thoroughly discussed by Lessig (1999).

⁴⁴ *File Transfer Protocol* is a standard networking protocol used to copy a file from one host to another on a TCP/IP-based network.

technological innovation, to freedom of expression, to cultural production. On the other hand, the decentralized structure of peer-to-peer systems and the collective power of large groups of people engaging in file-sharing constitutes a real threat to existing business models premised on the client/server relationship (Pouwelse et al., 2008). That being said, there are a number of technological disadvantages to the client/server model which have caused dissatisfaction among users leading to the adoption of more efficient systems for resource management and distribution. The most significant limitation of the client/server model has been the bottleneck at the server level due to poor scalability. As the number of clients increases exponentially relative to the number of servers, the load at the server level can become inefficient or even unmanageable. In contrast to this, peer-to-peer systems typically exhibit much better scalability. In these systems content and service is shared across a network in which every host acts as both a client and server. As Yu, Hong, & Xue (2006) note:

In contrast to the traditional server-client model of content distribution, the P2P technology has the advantage as [sic] low cost of hardware deployment, more scalable to accommodate a large number of users and amount of content, more fault tolerance for content being shared by multiple sources, and less time required to download a given data file. (1)

The upshot of the limited scalability in client/server systems is that the client/server model is poorly suited for uploading large amounts of content to centralized servers. In other words, despite the fact that most of the Internet's content is created on PCs at the margins of the network, the Internet has been structured to facilitate easy

downloading of content while making uploading needlessly difficult and slow. That being said, it is important to note that there are a number of disadvantages to peer-to-peer systems as well. For example, Shirky (2001) observes that centralized databases are a more efficient and rapid means of handling search queries as compared to other decentralized systems. Shirky also observes that centralized systems are better equipped to handle market transactions where it is necessary to calculate supply and demand at a single point time in order to produce an accurate and stable pricing system. Furthermore, Dornfest and Brickley (2001) caution that the new protocols associated with contemporary peer-to-peer file-sharing applications could threaten the Hypertext Transfer Protocol system by disrupting the established system of data location and retrieval. These authors comment that “Loosening the hyperlinks that bind all these various resources together threatens to scatter hay and needles to the winds” (p. 191).

Contemporary Peer-To-Peer Systems

Peer-to-peer file-sharing applications seemingly stormed onto the scene at the outset of the 21st century. However, Pouwelse et al. (2008) pinpoint the resurgence in peer-based communications a few years earlier in 1997 with the appearance of Slashdot.org. The authors observe that Slashdot was “the first large-scale case of user-generated content and user-controlled moderation” (p. 704). Nevertheless, contemporary peer-to-peer file-sharing software is more generally associated with the release of Napster in 1999. Since then, the popularity of various file-sharing platforms has grown tremendously. By 2003 it was estimated that up to 60% of total Internet traffic might be attributed to the bandwidth consumption of peer-to-peer file-sharers (Tsoumakos &

Roussopoulos, 2003). There has been considerable debate about the actual percentage of Internet traffic attributable to peer-to-peer activity. More conservative estimates of file-sharing activity have placed the level closer to 35% (Yu et al., 2006). Either way, there is a consensus that these platforms became widely popular in the first decade of the 21st century.

Generally speaking, the purpose of peer-to-peer platforms is to facilitate interaction and cooperation among individuals who wish to share resources with each other. Contemporary peer-to-peer file-sharing applications must perform two functions: (1) provide a search function that allows peers⁴⁵ to locate the desired content among the participating peers; and (2) provide a download function that allows a user to download the desired content (Xia & Muppala, 2010). A number of approaches have been taken by various peer-to-peer applications to accomplish these functions in a network environment characterized by highly transient peers and relative instability.

Taylor (2005) asserts that distributed systems⁴⁶ can be characterized as falling somewhere on an axis between centralized systems and decentralized systems. The typical client/server model could be described as a centralized system while a peer-to-peer system like Gnutella could be described as a decentralized system. Centralized systems tend to have a low number of servers relative to the number of clients and do not scale very well. Conversely, decentralized systems tend to adopt greater redundancy as a part of both the search function and the storage of content while exhibiting greater

⁴⁵ Taylor (2005) states that a *peer* “is when a device acts as both a consumer and provider of information” (p. 4).

⁴⁶ Taylor (2005) defines a distributed system as “a collection of independent computers that appears to its users as a single coherent system” (p. 2).

capacity for scalability. Taylor describes the search and storage functions of distributed systems as resource discovery and resource availability. The approach taken to either resource discovery or resource availability can be centralized or decentralized. For example, the modern DNS system could be described as a centralized approach to resource discovery while Gnutella's search function⁴⁷ could be described as decentralized. With regard to resource availability, a client/server model like Hulu.com or Netflix.com could be characterized as a centralized approach while Gnutella could be characterized as decentralized.⁴⁸ Taylor further defines distributed systems in terms of resource communication. Resource communication can be categorized as either brokered or point-to-point (peer-to-peer) communication. Communication in a brokered system is passed through a central server—meaning that individual peers do not have direct knowledge of each other. Napster was originally structured as a brokered system of communication. Resources in point-to-point systems are connected directly between the sender and the receiver, meaning that the peers are aware of each other's location in the network. Most of today's peer-to-peer applications operate in this vein through what Tsoumakos and Roussopoulos (2003) refer to as unstructured networks in which peers connect to each other in an ad hoc fashion.

Copyright and Peer-To-Peer Systems

Around the time of the meteoric rise and fall of Napster in 2001, the music industry started voicing its concerns about the pernicious effects of peer-to-peer file-

⁴⁷ See discussion on page 201.

⁴⁸ See discussion on page 201.

sharing software (Eliashberg, 2005; Hull, 2004). By 2007 the RIAA reported a decline in album sales in excess of 150 million units (McBride & Smith, 2008). That trend would continue the following year with Nielsen reporting a further annual decline in album sales of 14% (though this was accompanied by a small increase in the number of albums sold digitally) (Madden, 2009). This led the RIAA to assert in 2009 that it had lost billions in revenue over the previous decade and a half (Chad & Schultz, 2009). The drop in sales was evidently not restricted to just the recording industry as the RIAA also reported a significant decline in the sale of DVDs (Peoples, 2009). As Doyle (2002) states:

Record companies have been amongst the first to bear the brunt of peer-to-peer networking but they are by no means alone in their vulnerability. The same sort of risk exists for any sector or firm whose product can be reduced to bits and bytes. This includes all forms of media output including text-based, audio, and audiovisual and multimedia. Any information that can be reduced to a digital format and put into a computer file can be swapped and shared. (156)

However, scholarship on the actual effects of peer-to-peer file-sharing on the entertainment industry has been mixed (Bender & Wang, 2009; Cenite, et al., 2009; Ghosemajumder, 2002). Some scholars have suggested that peer-to-peer file-sharing is likely to increase sales of digital commodities—especially where music is concerned. Others have attributed declining sales not to peer-to-peer file-sharing but to the general economic downturn.

A pivotal moment in the history of peer-to-peer file-sharing and the music industry was the development and widespread adoption of the MPEG-1 Audio Layer 3

(MP3) file format. MP3 files allowed audio data to be compressed into sizes small enough for relatively easy transmission over the Internet. A compression algorithm made it possible to decrease the file size to one tenth its original size. Users could then download near-CD quality music files in seconds or minutes as compared to hours. The recording industry's initial response to the popularity of the MP3 format in the late 1990s was to attempt to kill the format altogether. According to Litman (2006):

...the industry was determined to elbow both illegal trafficking in MP3 files and legitimate distribution of music in MP3 format out of the online market. Record companies insisted that MP3 was a tool for pirates, and that all or at least most of the MP3 files sitting on consumers' hard disks were pirated recordings. Bands who posted MP3 files on their Web pages were ordered to take them down or lose their recording contracts. When the first portable MP3 player came out, the recording industry filed suit to stop it. (155)

Eventually their attempt was scuttled by the U.S. Court of Appeals for the Ninth Circuit which shot down the industry's lawsuit against the manufacturer of the Rio portable MP3 player. With the legal path cleared for the technology other manufacturers were quick to introduce their own MP3 players.

Notwithstanding their failed attempt to kill the MP3 format, the recording industry managed to score a number of legislative victories in the late 1990s. One such victory came with the passage of the No Electronic Theft Act (NET Act) in 1997. This federal law provided for the criminal prosecution of individuals who engaged in copyright infringement when the value of the copyrighted materials exceeded \$1000—

even when no monetary profit or commercial benefit was derived from the infringement. As Ghosemajumder (2002) observed, the act “closes what was referred to as the “LaMacchia Loophole”⁴⁹ and allowed law enforcement agencies to pursue those who facilitate piracy on a commercial scale but without monetary gain” (p. 10). In effect, the Net Act made peer-to-peer file-sharers liable in both criminal and civil courts (Cenite et al., 2009). As Drumm (2003) observes, “Civil lawsuits are ineffective against individuals with few assets. Criminal prosecutions provide intimidation and appropriate punishment for the illegal activities” (p. 186).

Another major legislative accomplishment for the copyright industries was the passage of the Digital Millennium Copyright Act of 1998 (DMCA). The DMCA was part of the World Intellectual Property Organization Copyright and Performances and Phonograms Treaties Implementation Act in which the United States implemented the requirements of the WIPO Copyright Treaty. Whenever the United States enters into an international intellectual property agreement, the provisions of the agreement generally do not become part of U.S. law until Congress enacts implementing legislation (Shapiro, 2003). In addition to bringing U.S. law into accord with WIPO, the DMCA criminalized the production of technological devices or software used to circumvent the digital rights management (DRM) systems which control access to copyrighted materials. In effect, the legislature decided that regulating the behavior of end users would be too difficult a task and that the more effective approach would be to regulate the code that made those

⁴⁹ The *LaMacchia Loophole* refers to the unsuccessful prosecution of MIT student David LaMacchia in *United States v. LaMacchia* for allegedly facilitating massive amounts of copyright infringement but without any intent of financial gain. The case was dismissed after the court reasoned that criminal law did not apply to non-commercial copyright infringement. Subsequent to the decision, Congress passed the NET Act to close the loophole.

behaviors possible (Lessig, 1999). Consequently, the DMCA encouraged the use of digital encryption technologies in the production and distribution of information commodities based on a pay-per-view model. In framing the DMCA both Congress and the copyright industries reasoned, somewhat absurdly, that since the transmission of information over the Internet was premised on the copying of files from node to node, every transmission of copyrighted information amounted to an act of copyright infringement—unless the transmission was given the explicit endorsement of the copyright holders. Therefore, the DMCA was written in overly broad terms so as to foreclose the possibility of future loopholes. As Litman (2006) observes:

The DMCA is long, internally inconsistent, difficult even for copyright experts to parse and harder still to explain. Most importantly, it seeks for the first time to impose liability on ordinary citizens for violation of provisions that they have no reason to suspect are part of the law, and to make noncommercial and noninfringing behavior illegal on the theory that that will help to prevent piracy. (145)

An important component of the DMCA was the inclusion of the Online Copyright Infringement Liability Limitation Act which limited the liability of online service providers who transmit, link, store, or cache copyrighted files shared by their customers. The limited liability was available to eligible service providers but was not extended to broadcasters, cable operators, or satellite television services that did not operate interactive digital networks (Middleton, 2003). The act protected ISPs from monetary

damages under specified circumstances for copyright infringement occurring over their networks.

Another significant (though lesser-known) piece of legislation passed in 1999 also served as a key component of the recording industry's arsenal in their legal attacks on peer-to-peer file-sharers. The Digital Theft Deterrence And Copyright Damages Improvement Act increased the available statutory damages for copyright infringement. It has been utilized by juries in both the Thomas-Rasset and Tenenbaum cases. As Oppenheim (2010) explains:

Statutory damages are currently set by copyright law at a minimum of \$750 per work infringed up to \$30,000. And, if the infringement is found to be willful, the ceiling goes up to \$150,000. In certain situations, a defendant can seek to be deemed "an innocent infringer" and have the floor decreased from \$750 to \$200 per work infringed. Over the years, the law has developed a number of factors that should be considered in determining what the statutory damages should be, such as: the value of the work infringed, the harm caused, the benefit to the defendant, the need for deterrence, and the willfulness of the defendant's infringement. It is left to a jury to decide how to balance these factors and what damages to assess. (¶ 2)

The high ceiling for statutory damages has figured prominently in both of the file-sharing cases which have gone to trial.

The legislation passed at the end of the 20th century served as the foundation of the RIAA litigation campaign against peer-to-peer file-sharing. The single-mindedness of

the recording industry's lobbying efforts against emerging decentralized systems of distribution might, at first glance, seem like a succession of desperate acts in the face of a technological inevitable. Yet industrial restructuring resulting from technological development has often accommodated incumbent industries. Far from inevitable, technological development itself is shaped by conflicts between old and new players. Peer-to-peer technologies may still be brought neatly into the existing order. Moreover, the disruptive potential of peer-to-peer file-sharing varies from system to system. Therefore, individual peer-to-peer platforms must be analyzed to see where there is commonality and divergence with both the social system of commoning and the social system of commodification.

Napster

Sean Fanning, a teenage college student living in Boston, was a big fan of MP3 files. But Fanning had grown increasingly dissatisfied with the available means of locating and downloading music from the Internet. Consequently, Fanning authored software which allowed users to share MP3 files from their hard drives with other users. Fanning christened his company Napster⁵⁰ and released the application in June of 1999. Napster's initial success in terms of adoption was spectacular. Almost immediately Napster began raising millions in venture capital. In 2000, just one year after Napster's initial release, a Pew study found that nearly one in four adult Internet users had downloaded music files, and 54% of them had used Napster to do it (Madden, 2009). Napster would eventually boast 80 million users downloading 3 billion songs every

⁵⁰ Napster was allegedly a nickname Fanning earned due to hygiene issues.

month (Drumm, 2003). Another study estimated that at Napster's height in April of 2001, 30 million Americans had downloaded music online—or about 29% of all adult Internet users. Moreover, 53% of Internet users ages 12 to 17 had downloaded music (Ghosemajumder, 2002). Although peer-to-peer file-sharing was around to stay, Napster's phenomenal success proved to be short-lived. It only took a little over a year for Napster to wind up in court after being sued by a bevy of record labels and composers. The plaintiffs alleged that Napster was guilty of contributory copyright infringement as it had allowed millions of people to share music without first purchasing it.

General Operation of Napster

Napster allowed users to connect to its peer-to-peer network and publish to its servers a list of content that users were willing to share from their hard drives. Users were also able to search for content made available from other computers on the network and then to download that content onto their hard drives at no charge (Doyle, 2002). Taylor (2005) describes this process in slightly more detail. First users connected to the Napster server and registered themselves to join the network. The main server received a list of MP3s that the user was willing to share and added them to the list of songs residing on the central database. When a user performed a search, Napster scanned the database on its main server and returned the addresses of the peers that had the desired content. The user would then connect directly to one of the peers with the desired content and begin to download the file without any further intervention from the host unless communication was disrupted. Taylor states:

Napster is P2P because the Napster peers bypass DNS and because once the Napster server resolves the IP addresses of the PCs hosting a particular song, it shifts control of the file transfers to the nodes. However, Napster is an example of brokered P2P for the same reasons. (37-38)

Legal Challenges

In 2000 the RIAA sued Napster under the DMCA (*A&M Records, Inc. v. Napster, Inc.*) in the United States District Court for the Northern District of California for contributory and vicarious copyright infringement. The plaintiffs filed for a preliminary injunction to stop the transfer of music files immediately. Napster invoked fair use, substantial non-infringing use, and the First Amendment in its defense. The court found that Napster could be held liable for contributory and vicarious infringement and granted the preliminary injunction. Napster in turn appealed to the United States Court of Appeals for the Ninth Circuit which issued a stay of the lower court's injunction pending its decision. The Ninth Circuit affirmed the District Court's findings on contributory and vicarious infringement in February of 2001.

As Middleton (2003) explains, contributory infringement is found when a party has knowledge of copyright infringement and contributes to it in some meaningful way. In order to be held liable for contributory infringement, a party must first be aware of an act of direct copyright infringement. But the district court did not require that Napster have actual knowledge of specific acts of direct copyright infringement and instead required that Napster have actual knowledge that copyright infringement was occurring among its users. In its defense Napster argued that it did not have specific knowledge of

actual acts of direct copyright infringement because it was unable to distinguish copyrighted files from non-copyrighted files. The district court rejected this argument. In addition, with regard to the second requirement of contributory infringement, the district court found that Napster contributed to the acts of copyright infringement in a meaningful way because the company provided the client application (which both connected peers and facilitated the downloading of content) and because Napster maintained a centralized database for locating copyrighted materials on users' hard drives.

Vicarious liability on the other hand, is found when a party has the right and the capacity to supervise an infringer's behavior and also benefits from the copyright infringement (Middleton, 2003). Both courts stated that Napster was likely engaging in vicarious infringement. The courts found that Napster benefitted from copyright infringement because Napster used the ability to infringe copyright as a draw to increase its subscriber base. The courts reasoned that because Napster's profitability depended on increasing this subscriber base there was indeed a benefit. With regard to Napster's right and ability to control the actions of those users who were infringing copyrights, the courts found that Napster could be held liable. Though the Ninth Circuit departed somewhat from the lower court by acknowledging the limited capacity of Napster to distinguish copyrighted materials from non-copyrighted materials, the court reasoned that the search function available to users was equally available to Napster. Therefore, Napster was capable of searching for infringing files just as easily as were the plaintiffs.

There are a couple of additional points about the relationship between Napster and copyright law which should be emphasized. First, Napster did not qualify for the safe

harbor provisions of the DMCA which were designed primarily to protect ISPs from liability in copyright infringement cases. The safe harbor provisions are codified in Chapter 5 §512 of the DMCA. Generally speaking, these provisions protect an ISP in the following situations: (1) as long as the transmission of infringing materials over the network is transitory and not made publicly available by the ISP; (2) the ISP has no direct knowledge or financial interest in linking to the infringing material; and (3) the ISP has no actual knowledge of the infringing material stored by users on its network. These provisions were enacted as part of the previously discussed Online Copyright Infringement Liability Limitation Act. However, as Napster and other peer-to-peer platforms do not qualify as ISPs, there is no safe harbor available to them in the DMCA.

With specific regard to the case, although Napster claimed substantial non-infringing use as part of its defense, the court did not fully analyze the non-infringing uses of Napster because the case involved a preliminary injunction to prevent further downloading of the plaintiffs' copyrighted works. The court only ruled that the plaintiffs were likely to succeed in demonstrating contributory infringement (Drumm, 2003). Substantial non-infringing use was a key component of the Supreme Court's reasoning in the 1983 Sony Betamax case.⁵¹ If a manufacturer of a particular technology could demonstrate substantial non-infringing use⁵² they could not be held contributorily liable. Yet there were key differences between the Betamax and Napster cases which likely

⁵¹ Universal City Studios and Walt Disney filed suit against the Sony Corporation of America, manufacturer of the Betamax video tape recorder, alleging copyright infringement. The plaintiffs argued that Sony was contributing to copyright infringement by selling recorders which allowed home users to record and copy plaintiffs' televised motion pictures. The case was filed in the federal district court in Los Angeles where Sony won but lost on appeal in the Ninth Circuit. The case then went to the Supreme Court who reversed the lower court decision finding that Sony was not liable for copyright infringement.

⁵² The Supreme Court looked to patent law for guidance and found that a manufacturer of a good with a substantial non-infringing use cannot be held contributorily liable for copyright infringement.

would have mitigated against this particular defense. The courts noted that whereas Sony had little knowledge or control over the behaviors of Betamax users, Napster knew or had reason to know of its users' infringing activities. But it is also important to note that the plaintiffs in the Betamax case failed to demonstrate that the video recorder threatened a developed market. There was no other existing system for the sale of televised information commodities in place. Conversely, Napster was seen as a considerable threat to both radio play and the sale of physical music commodities like CDs. As Drumm (2003) comments on the difference, "[in Napster's case] The user could transmit an exact duplication of the file while still retaining the original....Betamax cassettes were analog and there was a loss of quality from one generation to the next" (p. 172).

Significantly, both courts ruled that Napster users were themselves engaging in commercial activities despite the fact that they were sharing files without any financial remuneration. That is to say the courts considered the sharing of music files over the Napster network a commercial activity even though no money was being exchanged among the users. Without access to the Napster network, the coercive social relations of commodification ensured that users would be forced to purchase CDs to obtain the benefits that Napster offered for free. As Drumm (2003) explains:

The district court found, and the appellate court agreed, that Napster users were using the copyrighted works for commercial purposes. The district court stated that when a user sends a file to another anonymous user, it is not for personal use and that Napster users are getting something for free which normally is not free.

(166)

The court arrived at this determination while giving consideration to Napster's fair use defense. The so-called purpose and character element of fair use law required that the district court determine whether the allegedly infringing use is commercial in nature. Moreover, there is no requirement to demonstrate a direct economic benefit to the defendant. As Gorman and Ginsburg (2006) state, "Rather, repeated and exploitative copying of copyrighted works, even if the copies are not offered for sale, may constitute a commercial use" (p. 838). These authors also note that commercial use includes the repeated and exploitative unauthorized copying with the intent to avoid the expense of purchasing authorized copies. The court, in effect, made illegal the exodus from the social relations of commodification in the realm of information production and exchange.

The courts' finding of commercial copyright infringement weighed against Napster's fair use defense. The Ninth Circuit reinstated the injunction in March of 2001. In July of 2001 Napster shut down its services in order to comply with the injunction. The company agreed to pay a settlement of \$26 million in September of that year (Borland, 2001, September 24). After a bankruptcy court blocked the sale of Napster to media giant Bertelsmann in 2002 for \$85 million, Napster was forced to liquidate its assets (Evangelista, 2002). In the years since the company's demise, the Napster brand and logo has changed hands between Roxio and BestBuy, but the subscriber rate has never come close to approaching previous levels.

Gnutella

In the aftermath of the Ninth Circuit decision on Napster peer-to-peer technology underwent some permutations which resulted in the continued viability of file-sharing. A

new generation of peer-to-peer networks was created and maintained by a variety of interests. Some were intent on profiting from what they believed was the inevitable industrial restructuring of the production and distribution of informational and cultural goods. Others however, were not solely motivated by the search for profit. Gnutella emerged in early 2000 during a second wave of peer-to-peer file-sharing technological development. Moreover, Gnutella was a service often considered to be the first purely decentralized peer-to-peer network (Drumm, 2003).

In March of 2000 Tom Pepper and Justin Frankel were working for a software company founded by Frankel three years earlier called Nullsoft. The company produced the well-known Winamp Media Player application before being purchased by America Online in 1999. According to Taylor (2005), Pepper and Frankel developed Gnutella in just under fourteen days and released it as an experiment before their bosses at AOL told them to kill the project. According to Pepper, they had developed Gnutella primarily as a means to share cooking recipes (Kan, 2001). The name Gnutella is a neologism derived from GNU and Nutella. The Free Software Foundation's *GNU General Public License* is a license which works in conjunction with copyright law to require that any source code licensed with GPL is always available to others to modify as they wish, as is any code that is derived from GPL-protected code (Lessig, 1999, 2001). GNU itself is a recursive acronym for "Gnu's Not Unix". Nutella is a wonderfully delicious hazelnut-chocolate spread made by the Italian confectioner Ferrero. As Gnutella's name implies, the software was released under the GNU General Public License by Pepper and Frankel after AOL quashed the project. According to Taylor (2005):

Just as Gnutella was about to disappear, open source developers intervened and Bryan Mayland reverse-engineered Gnutella's communication protocol and released the findings on the <http://gnutella.nerdherd.net>. This site hosted the protocol documentation but also hosted a link to Gnutella's Internet Relay Chat (IRC) channel #gnutella, which had a massive response and significantly affected the future development. (102)

By 2005 the Gnutella network boasted a population of 1.81 million users (Mennecke, 2005, June 2). And in 2007 Gnutella had become the most popular file-sharing network on the Internet, accounting for around 40 percent of the market (Bangeman, 2008, April 21).

General Operation of Gnutella Implementation

As Kan (2001) explains, Gnutella is not a branded software like Napster or iTunes. Rather, Gnutella is a communication protocol used by various Gnutella-compatible applications to access the Gnutella peer-to-peer network. These Gnutella applications include well-known names like BearShare, LimeWire, Morpheus, Qtella, and Phex—each of which constitutes a virtual network of continuously changing nodes and pathways. There is no centralized resource communication in which transmissions are brokered through a central point or server. Unlike client/server systems, hosts⁵³ in the Gnutella network act as both clients and servers. Accordingly, they are referred to as *servents*, an amalgamation of client and server. Peers join the Gnutella network by connecting to other peers (hosts) already on the network. Peers are typically connected to

⁵³ A host is a computer connected to a network.

three or four other nodes. Gnutella uses point-to-point resource communication in which the connection between any two nodes is created in an ad hoc fashion. Two nodes may be on the network simultaneously, but the communication between the two may not be accomplished in a conventional or stable manner. As Kan says, "...once you connect with one host, you're in. Your Gnutella node mingles with other Gnutella nodes, and pretty soon you're in the thick of things" (p. 97).

Much has been made of the fact that the peer-to-peer networks which were developed in the wake of Napster's legal defeat increasingly relied on decentralized communication. Recall that Napster's brokered resource communication required users to connect to a centralized index located on one of Napster's servers in order to perform search queries before eventually being directly connected to another peer where the desired content was located and available for downloading. Gnutella, on the other hand, relied on a system in which resource discovery, availability, and communication are all decentralized. At least that's how it works in theory. But as Taylor (2005) cautions, "Decentralized networks are inherently self-organizing and so it is not only possible but indeed very likely that strong servers of information...could easily turn a decentralized network into a semi-centralized one" (pp. 13-14). To understand the limits of Gnutella's capacity to function as a decentralized system of commoning a deeper investigation into the operation of the network is required. The details of Gnutella's operation are significant not only for their technical merit, but also because they help unearth the values and goals underlying the technology's structural features.

Taylor (2005) provides a useful description of the technical operation of Gnutella. Generally speaking, Gnutella is a networking protocol for a distributed search. Implementations of Gnutella, like LimeWire or Bearshare, provide client-side interfaces through which a user can perform a search query, view the returned results, and initiate a download. At the same time that all of this is going on, the interface also allows the user to accept queries from other users, checking to see if content desired by other peers is available, and to initiate an upload if appropriate. This is the dual client and server function to which the term *servent* refers.

In order for a user to join the network and perform these tasks a series of steps must be undertaken. First the user connects to the Gnutella network by locating a host already on the network. In the early days users would often locate a host using a realtime online text messaging system like Internet Relay Chat (IRC). Alternately, users may locate available hosts through a cache like GnuCache or by pinging possible hosts. Once a potential host is located, a “connect” message is sent to the host to request admission to the network. If the host responds by accepting the request, the user can complete the connection and join the network by opening a TCP/IP connection to the other peer. The user then makes their presence known on the network by pinging the neighbor peer who passes the message on to their neighbors and so on.

In order to initiate the discovery process, the user sends out a search query to neighboring peers who forward the query to their neighbors and so on. Each servent that receives the query searches its local files and returns a query response based on the results of the local scan. The query response is directed back across the network along the

initial path it took when leaving the original user. Significantly, servers who pass the message along do not cache the query responses. Each pass from one peer to the next is known as a hop. Queries do not get passed across the network endlessly or a flooding of the network would result and overwhelm the system. A restriction referred to as time to live (TTL) is placed within the query to limit the number of transmission iterations. Moreover, to make sure that each node does not serve the same query repeatedly, messages also contain unique identifiers. After a positive query result is returned to the initiator of the query, a direct connection may be established between two servers in order to carry out a download. Nevertheless, each hop adds not only to the total bandwidth usage but also to the time needed to perform a query (Hong, 2001). This means that the scalability of the network is extremely dependent on the communal participation of network peers. That is to say if the network grows by adding peers who do not share sufficient amounts of content, the overall performance of the network degrades with increasing size. The scalability of the network therefore is conditioned by resource availability.

A free-rider is a peer on the network which downloads files from other peers but does not make content available for upload by other peers—thus becoming a mere client on the network. Peer-to-peer networks which do not provide incentive mechanisms for sharing are more vulnerable to free-riding problems (Xia & Muppala, 2010). Taylor (2005) indicates that around 70 percent of Gnutella users share no content at all. If Gnutella were a truly decentralized network, every peer on the network would potentially share as much as it consumes. Since there is a divergence here between theory and

practice, Gnutella has ordered its structural features with this limitation in mind. To scale with the rapid growth in its user population, Gnutella has adopted a two-tier overlay in conjunction with more efficient search mechanisms (Rasti, Stutzbach, & Rejaie, 2006). The virtual network was divided into two levels consisting of a small top-level overlay of ultrapeers and a bottom layer of leaf peers. This means that instead of treating all nodes equally, the top layer of ultrapeers is charged with routing search queries and responses. As Rasti et al. (2006) explain:

The two-tier architecture attempts to dynamically maintain the following two properties in order to scale with the number of peers while ensuring short pairwise distances between peers as they join/leave the system: (i) a proper balance between ultrapeers and leaf peers, and (ii) a well-connected top-level overlay where each ultrapeer has a configured number of neighbors. (1)

In effect, what Gnutella has done is to adopt a centralized/decentralized topology to achieve sufficient scalability as its user-base has increased. The top-level peers function as caching servers which are somewhat similar to Napster's brokered system of centralized indices. Rather than simply propagate queries across the entire network, ultrapeers consult their own databases before directly connecting peers. This results in a much more efficient use of bandwidth on the network. Taylor (2005) comments on this centralized/decentralized approach by saying:

It is interesting to note that both Gnutella and Napster converged towards a centralized/decentralized topology, even though they came from completely different sides of the coin. Gnutella started its life as a decentralized system and

Napster started its life as a centralized search architecture, with brokered communications. However, Gnutella inserted super-peers and Napster duplicated its centralized search engines for scalability, both resulting in a similar design topology.... (127)

FastTrack

The FastTrack protocol and Kazaa peer-to-peer system were created by an Estonian programmer named Jaan Tallinn while working at a software development firm he cofounded called Bluemoon. Tallinn partnered with Niklas Zennström and Janus Friis to release Kazaa through a Dutch company called Consumer Empowerment in March of 2001 (Levine, 2004, December 20). Kazaa was wildly successful in its early years. Kazaa is sometimes characterized as a decentralized peer-to-peer file-sharing system. Also coming in the wake of Napster's legal battles, Kazaa offered music fans a viable alternative to Napster. Unlike Napster however, Kazaa users were not limited only to trading music files. Kazaa supported the sharing of music, movies, photos, and text documents. By the summer of 2002 Kazaa had grown larger than Napster at its peak and by 2004 Kazaa was the most downloaded piece of software in history (Goldsmith & Wu, 2006). At the height of its success, Kazaa had more than 4 million simultaneous users ("Kazaa site becomes legal service," 2006, July 27) and was estimated to have been downloaded onto about 140 million computers ("How Skype and Kazaa changed the net," 2005, June 17).

General Operation of FastTrack Implementation

Zennström credits Kazaa's early success to its dependability and user-interface, but its success was more likely related to its capacity for scalability ("How Skype and Kazaa changed the net," 2005, June 17). Despite having emerged before the FastTrack protocol, Gnutella's networks were collapsing within months of release due to the flood of search queries which accompanied the exponential growth of its user base (Goldsmith & Wu, 2006). Gnutella eventually addressed these problems with the introduction of the previously discussed *two-tier overlay system* of ultrapeers and leaf peers. However, Kazaa had the initial advantage in the peer-to-peer market because it began with a centralized/decentralized topology. Kazaa's programmers created a top-level layer of peers chosen by Kazaa called supernodes. Like Napster's centralized indices, the supernodes maintained indices of users' shares in order to facilitate search queries. Supernodes also handled data flows and connections among other network peers. Unlike Napster, but similar to Gnutella, these supernodes were not under the direct control of Kazaa. As Drumm (2003) explains:

While not the first decentralized P2P network, Fast Track excelled by using supernodes, which act as temporary indexing servers and add stability to the P2P network. This supernode remains outside the control of the company and is incorporated into the client software, which at that time was Kazaa. The supernode is the most centralized part of the Fast Track network, and consequentially, the most vulnerable. It acts as a relay between computers,

directing one computer's request to the corresponding computer. This is the main reason the supernode was left outside the control of the company. (173)

Notwithstanding the implementation of its two-tier layer system, the health of the Kazaa network (like Gnutella) was still contingent upon the amount of freeriding. A study conducted in 2003 of the average sharing ratio demonstrated that the typical Kazaa user consumed much more than she contributed (Pouwelse et al., 2008). The study found that a minority of users (22.5%) were responsible for most of the bandwidth donations. Another potential weakness for the Kazaa network is FastTrack's use of the UUHash hashing algorithm to expedite checksumming of very large files. A hash function like UUHash takes a variable-length input and returns a fixed-length output which is typically smaller in size (Waldman, Cranor, & Rubin, 2001). Hash functions can dramatically reduce the time it takes to perform search queries by streamlining the process of data comparison. But the FastTrack protocol's use of UUHash resulted in a weak overall hashing system. According to Mennecke (2005, June 2), the copyright industry was able to exploit this weak hashing system to introduce counterfeit and corrupt files onto the network. He explains that "Since UUHash hashes a file at predetermined integers, whoever wishes to corrupt a network only has to make sure the proper integers are hashed according to correct standards, while the rest of the file can be polluted" (§ 9).

Unfortunately, many of the technical details about the FastTrack protocol remain largely unknown because, unlike Gnutella, the FastTrack protocol was not released as an open-source project. A number of distinct and mutually incompatible peer-to-peer systems are based on the FastTrack protocol. Popular implementations of the FastTrack

protocol included Kazaa, Morpheus,⁵⁴ Grokster, and iMesh. The fact that FastTrack is administered as an intellectual property diminishes its characterization as a decentralized system. In fact, the system is centralized enough that Morpheus was successfully shut out of the system in February of 2002 for failure to pay licensing fees. The centralized economic structuring of the FastTrack system also gave the copyright industry something to target in court.

Legal Challenges

In November of 2001 the Dutch Wing of the International Federation of the Phonographic Industry (IFPI) successfully sued Kazaa. Two months later, in an attempt to avoid the hefty fines imposed by the courts, Kazaa was sold to Sharman Networks, and because the new owner was outside the jurisdiction of the Dutch court, the court could not force Kazaa to suspend its operations (Drumm, 2003). The company did its best to make itself a difficult legal target—Sharman Networks was an Australian company but it was legally incorporated in the nation of Vanuata—a group of islands off the coast of Australia in the South Pacific (Ghosemajumder, 2002). In March of 2002, the Netherlands Court of Appeals reversed the lower court decision anyway, holding that individual users, not Kazaa, were the ones liable for copyright infringement.

In October of 2001, just seven months after Kazaa's initial release, the RIAA filed a lawsuit against three FastTrack systems—Kazaa, Grokster, and MusicCity (Goldsmith & Wu, 2006). In January of 2003 the United States District Court in Central California moved the lawsuit forward by granting jurisdiction, reasoning that because over 21

⁵⁴ Morpheus used many different peer-to-peer protocols over the years.

million Americans use Kazaa, there were significant business interests at stake in the United States (Drumm, 2003). The defendants assembled a team of accomplished attorneys along with lawyers from the Electronic Frontier Foundation (EFF).⁵⁵ Kazaa's defense was premised on the notion of substantial non-infringing use which had been cited in the Betamax case. Furthermore, the defense argued that unlike Napster, this newer generation peer-to-peer system did not have control over the activities of its users. Two months later the court accepted the Betamax defense and granted summary judgment for the defendants. The judge reasoned that technological innovation should not be impeded by overly strict adherence to copyright principles. The RIAA quickly appealed and the case went to the United States Court of Appeals for the Ninth Circuit where the court again found in favor of the defendants based on the substantial non-infringing use defense and the need to encourage technological innovation even at the expense of incumbent industries.

In 2005 the case came before the Supreme Court as *MGM Studios, Inc. v. Grokster, Ltd.*—Sharman Networks had been dropped from the case because of their extraterritorial status. To the surprise of many, the Supreme Court unanimously reversed the lower courts and found that Grokster and other companies operating on FastTrack networks could be held liable for copyright infringement. Unlike the lower courts, the Supreme Court did not rely on the Betamax case and opted not to reexamine substantial non-infringing use. Instead the Court reasoned that by licensing other companies to use the FastTrack protocol Kazaa had, in effect, induced others to commit copyright

⁵⁵ Goldsmith and Wu (2006) describe the EFF as an organization that intervenes through political participation, litigation, education, seminars, and various other means to defend the Internet from the interference of territorial governments.

infringement and could be held liable for contributory infringement. After the decision Grokster reached a settlement with the plaintiffs for \$50 million, giving them up to 20 years to collect the money. The settlement required Grokster to stop engaging in either direct or contributory copyright infringement and to cease distributing peer-to-peer file-sharing software (Garrity & Butler, 2005).

With the legal path cleared for the copyright industries to hold other peer-to-peer systems liable, Kazaa and Sharman Networks scrambled to find alternative economic models to keep themselves afloat. Kazaa had long courted advertising revenue by allowing companies to advertise within the software's user interface. In 2003 Kazaa partnered with Altnet and Streamwaves and began delivering 30 second samples of songs to Kazaa users. Altnet paid Kazaa to feature its songs at the top of the returned results for search queries. Kazaa users could then follow a link to a music streaming service conveniently offered by Streamwaves (Healey, 2003). The arrangement was an attempt by Kazaa to extend and highlight the software's non-infringing uses. As Drumm (2003) observed:

Sharman contends that Kazaa users have downloaded over 57 million legal, free copy-protected promotional materials. Trying to shed the image that P2P networks are the black markets of the 21st century, Kazaa is partnering up with companies to release non-copyrighted products over the Kazaa network. (177)

Kazaa's search for alternative business models became increasingly desperate as it faced the prospect of no longer being able to license usage of the FastTrack protocol. At one point the company even proposed using the network to create a large-scale

parallel processing computer without first informing its users (Goldsmith & Wu, 2006). The apparent failure to arrive at a sustainable business model eventually led Kazaa to not only accept less-reputable advertisers but to also integrate malware⁵⁶ into their software. The spyware and adware incorporated into Kazaa's installation angered many users. Unsurprisingly, the network began to shrink and by 2005 there were only about 2-3 million users (Mennecke, 2005, June 2). The following year Kazaa settled a lawsuit with the big four record labels—EMI, Sony BMG, Universal Music, and Warner Music—for \$100 million. The combined impact of corrupt files (from weak hashing), malware, the emergence of newer peer-to-peer networks, the legal fallout from the Grokster case, the \$100 million settlement against Kazaa, and the targeting of individual users as part of the RIAA litigation campaign made the outlook bleak for the once impressive FastTrack network.

LITIGATING AGAINST INDIVIDUAL USERS

Although the copyright industries had scored a number of important legal victories there was a concern that the industry (and the law) would always lag behind new technological capacities for distributing cultural and informational goods online without the authorization of the copyright holder. Consequently, the RIAA began looking for another legal tactic to stem the flow of unauthorized access. And so began the industry's campaign against individual file-sharers. In 2002 the RIAA took advantage of the DMCA's provision requiring ISPs to reveal the identity of alleged copyright

⁵⁶ *Malware* is short for *malicious software* and generally refers to any software which infiltrates a computer system without the user's consent.

infringers after the copyright holder has obtained a subpoena from a federal district court. The RIAA's use of subpoenas soon created a rift between copyright holders and Internet service companies. ISPs chafed at the potential costs of complying with the large number of subpoenas (Gruenwedel & Garrity, 2002). Undeterred, the RIAA obtained subpoenas targeting ISPs such as Verizon Communications, Charter Communications, and Pacific Bell Internet Services (Olsen, 2003, October 6). Both Charter and Verizon challenged the RIAA's demands in court. The companies lost at the district level but the appellate courts ruled that the ISPs should not be required to turn over any information about their customers. The courts based their decisions on a section in the DMCA dealing with ISP compliance with subpoenas in cases of transitory communication. The courts found that the section on transitory communication did not apply in the case of peer-to-peer file-sharing because the transmissions were not stored on equipment owned and maintained by the ISPs. The information was not being made publicly available by the ISPs. Thus the lower court decisions were reversed. As Drumm (2003) explains:

Verizon argued that section 512 does not apply to ISP's who act as conduits for P2P networks. Their rationale is based on the structure of the P2P system.

Verizon supplies its customers with a connection to the Internet. Customers who use P2P software access copyrighted files from other user's computers. Verizon is not hosting any of the copyrighted files on its servers. (182)

In response to the courts' decisions, the RIAA initiated a new program to stem the flow of unauthorized access to copyrighted materials—the so-called John Doe lawsuits.

Armed with increased statutory damages under the Digital Theft Deterrence and Copyright Damages Improvement Act and with the support of the IFPI (Koranteng, 2004), the RIAA turned its sights to individual file-sharers. On September 8, 2003, the RIAA fired its opening salvo against individual file-sharers by filing 261 lawsuits (Bruno, 2008). In doing so, the RIAA demonstrated its willingness to ignite a contentious legal debate and long-term public relations battle to ensure the continued stream of revenue from its monopolies on intellectual property. As Goldsmith and Wu (2006) state:

The consumers were an easy target. The vast majority lacked the legal resources to defend a lawsuit, and almost certainly had violated U.S. copyright law. But why would an industry want to attack its customers? The recording industry, it seemed, preferred to be feared than loved. Said Cary Sherman, the RIAA's president, "The public has been educated and re-educated and re-educated again," and "when your product is being regularly stolen, there comes a time when you have to take appropriate action." As advertising consultant Lee Kovel put it, "They want to make a statement and strike fear. They don't care about PR." (114)

From the beginning, the FastTrack system appeared to be the RIAA's primary target as the overwhelming majority of individuals facing litigation had used these networks (Mennecke, 2005, June 2). The RIAA hired Maryland-based MediaSentry⁵⁷ to look for copyrighted songs being shared by individuals on peer-to-peer networks like Kazaa. The company downloaded suspect files, and then presented those downloads as evidence in court of copyright violation (McBride, 2009). As Butler (2008) describes:

⁵⁷ In addition to the RIAA, MediaSentry was employed by the MPAA and the IFPI.

The company collects the list of music files the user is sharing, identifies songs that belong to RIAA-member companies and downloads the files. MediaSentry also collects very detailed text logs as evidence of its activities throughout the entire process. The ISP associated with an IP address is easy to identify. The American Registry for Internet Numbers, a nonprofit organization, provides the information via a search on its Web site. MediaSentry sends the information to the RIAA, which has staff that listen to each downloaded file to verify the identity of the song. The RIAA notifies the ISP to preserve the evidence connected to the ISP address. The record companies then file a lawsuit naming "John Doe" as the unnamed defendant. Once they file the suit, the labels may then have the court issue a subpoena for the ISP to identify the registered user for the IP address. That person then replaces John Doe as the defendant. (§ 27-30)

The RIAA sent tens of thousands of these notifications to ISPs beginning in 2003. Then in 2005, the RIAA announced that it would be targeting college students for copyright infringement and began notifying universities of alleged illegal activities occurring on their networks (Holland, 2005, April 23). In 2007 the RIAA started sending pre-notification letters to universities, asking university officials to distribute the letters to the as-of-yet unidentified students who were the actual targets of impending litigation. These letters offered students a chance to settle claims before being sued (Butler, 2007). Typical settlement offers to college students and members of the general public demanded \$4,000 from the accused in order to head off a lawsuit ("Keeping pirates at bay," 2009). But there was resistance to the RIAA's campaign. Defendants began

fighting back, judges overturned rulings and reduced settlement fees, and public opinion turned against the recording industry. The RIAA would struggle significantly to maintain the viability of its litigation campaign in the face of this counterinsurgency.

Chapter 5 The RIAA Copyright Litigation Campaign Targeting

Individual File-Sharers

The Recording Industry Association of America (RIAA) litigation campaign targeting individual file-sharers was enormous both in terms of the sheer number of people targeted and the personal misfortune left in its wake. Yet the enormity of the campaign should not be misconstrued as evidence of perfectly choreographed domination by large music firms over hapless file-sharers. The ultimate outcome of the litigation campaign was a product of both the RIAA's efforts and the efforts of those who worked against it. By acknowledging this somewhat obvious state of affairs we come to understand the trajectory of capitalist development in the sphere of music production and distribution as a consequence of the struggle among competing interests. In this chapter I will demonstrate how the resistance of Internet Service Providers (ISPs), college students, university administrators, and a small band of lawyers and their clients imposed limits on the effectiveness of the RIAA campaign. Beginning with the first wave of subpoenas issued to ISPs in the summer of 2003 to the cessation of the litigation campaign in 2008 and continuing on with the ongoing Thomas-Rasset and Tenenbaum trials,⁵⁸ this chapter provides a detailed history of the RIAA litigation campaign through the lens of struggle as various interested parties sought to activate different structural features of the law for their own benefit. As part of this process the courts were required at certain points in the campaign to take positions on: (1) the legitimate or illegitimate uses of communications systems; (2) the legitimate or illegitimate uses of the courts; and

⁵⁸ Jammie Thomas-Rasset was initially sued in 2006 and Joel Tenenbaum in 2007.

(3) the legitimate or illegitimate uses of informational and cultural goods. Ultimately, I contend that the legal conflict over peer-to-peer file-sharing was conditioned as much by resistance to the litigation campaign as it was by the desire of the RIAA to manage the impact of file-sharing.

PROLOGUE: THE SUPPRESSION OF THE RADICAL POTENTIAL OF PEER-TO-PEER

PLATFORMS

Chapter 4 was, in part, a history of the recording industry's initial attempts to contain the disruptive potential of emerging file-sharing applications by suing commercial peer-to-peer innovators. It is a story of intra-firm struggle and industrial restructuring. First Napster was targeted by the recording industry in December 1999, followed by Scour, Aimster, AudioGalaxy, Morpheus, Grokster, Kazaa, iMesh, and LimeWire (EFF, 2007). Napster was sued by the RIAA in the U.S. District Court in Northern California for contributory and vicarious copyright infringement (Macavinta, 1999, December 7). Scour, like Napster, was a brokered peer-to-peer platform utilizing a central index of files available for downloading (Borland, 2001, October 3). Because Scour allowed users to share movies in addition to music the RIAA was joined by the Motion Picture Association of America (MPAA) in their suit in 2000 against Scour in federal district court in New York (Greene, 2000, July 24). Aimster was another peer-to-peer file-sharing platform which allowed users to create "buddy lists" much like those used by AOL Instant Messenger. Aimster users could then share files with a select group of people. The RIAA filed suit against Aimster in federal district court in New York in May of 2001 (Borland, 2001, May 25). AudioGalaxy was a peer-to-peer platform which

benefitted from the migration of users in the wake of Napster's demise. Despite the company's efforts to voluntarily filter copyrighted music from its network, the RIAA filed suit against AudioGalaxy in 2002 (Mariano, 2002, June 18). Morpheus (Streamcast) and Kazaa (Sharman) were part of the second wave of post-Napster peer-to-peer networks and were defendants in the previously discussed *MGM Studios, Inc. v. Grokster, Ltd.* case lasting from 2003-2005.⁵⁹ iMesh was an Israeli-based peer-to-peer company incorporated in Delaware and targeted by the RIAA in 2003 (Borland, 2003, September 19). In 2005 Free Peers Incorporated, distributor of the BearShare application operating on the Gnutella protocol, received a cease-and-desist notification which eventually resulted in a settlement with the RIAA (SlyckTom, 2006, May 5). And in 2006 Limewire touched off a four year legal battle with the RIAA after rejecting a cease-and-desist notification making the Gnutella-based network one of the last holdouts against the recording industry (Mennecke, 2010, May 12). These last three cases—iMesh, Bearshare and Limewire—overlapped with the initiation of the RIAA litigation campaign against individual file-sharers and are indicative of the industry's continued willingness to target the developers of commercial peer-to-peer platforms. All of these companies settled with the RIAA, usually to the tune of tens of millions of dollars.⁶⁰ However impressive this string of legal victories over commercial peer-to-peer platforms may seem, it alone was insufficient to curb the tide of file-sharing. The RIAA was beset with a host of jurisdictional problems and technological challenges, rendering this legal strategy ineffective. Downed peer-to-peer networks were quickly replaced by newer alternatives;

⁵⁹ Sharman Networks was eventually dropped from the list of defendants.

⁶⁰ iMesh settled for only \$4.1 million; Kazaa settled for \$100 million (Mennecke, 2010, May 12).

offshore companies dodged legal enforcement; and the relative ease with which a reserve army of programmers and hobbyists developed newer and more sophisticated peer-to-peer systems all but guaranteed the dogged persistence of file-sharing (EFF, 2007).

Despite the perception that the recording industry scored a major legal victory in the Grokster case, a close reading of the opinion authored by Justice Souter reveals that the case did not explicitly address whether or not the Betamax safe harbor provisions applied to Grokster. That is to say, even though the Court unanimously held that Grokster could be held liable for copyright infringement,⁶¹ there was no clear change from the substantial non-infringing use precedent established in *Sony Corp. of America v. Universal Studios, Inc.* In fact, the concurring opinions offered by Justices Ginsburg and Breyer split on the matter. With no clear legal path established by the courts to prevent outright the development of new peer-to-peer platforms and faced with increasingly decentralized peer-to-peer networks and legions of file-sharers (numbering somewhere in the neighborhood of 60 million in the U.S. alone), a strategy based exclusively on the targeting of the distributors of commercial peer-to-peer platforms was no longer viable (Mennecke, 2007, February 28). Consequently, the RIAA changed targets in the summer of 2003.

ACT 1: DMCA SUBPOENAS

There were warning signs of what was to come. For several years previous to 2003 the RIAA had been endeavoring to educate the public about the illegality of sharing

⁶¹ The Supreme Court found the defendants liable on the basis that they induced copyright infringement by distributing their software with the object of promoting its use to infringe copyright. Because of this ruling, *inducement* now sits alongside the principles of *vicarious* and *contributory* as a third doctrine of copyright infringement.

music over peer-to-peer networks (RIAA, 2003, September 8). Then in the spring of 2003 the RIAA sued four university students under the DMCA without first notifying universities officials (Kaplin & Lee, 2006). The RIAA accused the students of running a Napster-like service that indexed and executed searches for MP3 files on their college networks. The RIAA alleged that the students distributed 27,000 files, 500,000 files, 650,000 files, and over 1 million files respectively (Dean, 2003, April 5). Within a month the students each settled with the record companies, with settlements ranging between \$12,000 to \$17,500 (Bowman, 2003, June 25; Graham, 2003, September 10). Clearly the RIAA meant the suits as a warning. Matt Oppenheim (Dean, 2003, April 5), RIAA senior vice president of business and legal affairs, stated at the time:

This round of suits is intended to send a message to other students who are engaging in this type of behavior....You cannot expect to infringe until you get a cease-and-desist letter and then stop and assume that life will go on. (¶ 3-4)

Then in late April the RIAA took the novel step of tapping into the chat functions of both the Kazaa and Grokster networks to issue warnings to users that they were in violation of federal copyright law (Bowman, 2003, June 25).⁶² Oppenheim (Graham, 2003, September 10) commented “We sent instant messages to every person we sued, warning them this would happen if they continued. They should’ve known this was illegal” (¶ 21).

In June 2003 the RIAA announced that it would be launching a massive litigation campaign targeting individual peer-to-peer file-sharers. The organization indicated that it would be scanning the public directories of peer-to-peer networks to ascertain both the

⁶² The RIAA used the chat functions built into the user interface of Grokster and Kazaa to send automatic messages to thousands of individuals they believed were sharing copyrighted files. The message warned users that they were breaking the law.

files that people were sharing and the IP address from which the files were being shared. They would then serve the relevant ISPs with subpoenas to identify the account holders. The subscribers would then be named in subsequent suits filed in federal district courts starting as early as August (Bowman, 2003, June 25). During this initial execution of the file-sharing litigation campaign, the RIAA relied on a controversial provision of the DMCA that allowed them to issue subpoenas to ISPs for the purpose of identifying file-sharers without judicial oversight (Roberts, 2004, January 21). Under the provision copyright holders were able to subpoena an ISP in order to obtain the names and addresses of persons they believed to be infringing their copyright. The subpoena provision found in § 512(h) of the DMCA permitted court clerks to issue such subpoenas without a judge's signature (Dean, 2003, September 17). The copyright holder simply had to provide the court clerk with three items: (1) a notification of the copyrighted work(s) under dispute; (2) the proposed subpoena directed to the ISP; and (3) a sworn declaration that the intent of the subpoena was only to identify the alleged copyright infringer (*Recording Industry Association of America, Inc. v. Verizon Internet Services, Inc.*, 2003). This lack of judicial oversight provoked one of the first legal tests to the RIAA legal strategy.

In July of 2002 the RIAA served Verizon with a subpoena pursuant to § 512(h) of the Copyright Act in an effort to link IP addresses to account holders. Verizon refused to comply with the subpoena, arguing that they were protected under the ISP safe harbor provisions of the DMCA. In January 2003 a federal district court rejected Verizon's argument, ordering the company to disclose the names of the subscribers in question.

Meanwhile, the RIAA served Verizon with a second DMCA subpoena. Verizon immediately moved to quash the second subpoena on the grounds that the court, acting through the court clerk, lacked jurisdiction. The district court denied the motion to quash and again ordered Verizon to disclose the identities of the subscribers. Verizon appealed both orders to the Court of Appeals for the District of Columbia Circuit where the two cases were consolidated into one (*Recording Industry Association of America, Inc. v. Verizon Internet Services, Inc.*, 2003). Verizon was not alone in its unhappiness with the subpoenas—Charter Communications and Pacific Bell Internet Services also challenged the RIAA in court. However, with the initial defeat of Verizon at the district court level the RIAA seized the opportunity to begin issuing subpoenas to ISPs. More than 1500 subpoenas were issued between August and September 2003, allowing the RIAA to begin compiling a list of the names of individuals to target in court (EFF, 2007).

On September 8, 2003, the RIAA, representing five multinational firms, filed lawsuits against 261 individuals for alleged copyright infringement over peer-to-peer networks including Morpheus, Kazaa, and Grokster ("Not-so-Jolly Rogers," 2003, September 10). The barrage of lawsuits marked a significant change in the RIAA's legal strategy to contain the threat of file-sharing. A RIAA Press Release (RIAA, 2003, September 8) announced the commencement of the litigation campaign:

The Recording Industry Association of America (RIAA) announced today that its member companies have filed the first wave of what could ultimately be thousands of civil lawsuits against major offenders who have been illegally

distributing substantial amounts (averaging more than 1,000 copyrighted music files each) of copyrighted music on peer-to-peer networks. (§ 1)

RIAA president Cary Sherman further stated, “Our goal is not to be vindictive or punitive. It is simply to get peer-to-peer users to stop offering music that does not belong to them” (Borland, 2003, September 8).

Perhaps sensing the potential public backlash for its apparent willingness to target its own consumers, the RIAA did not announce the names of any of the litigants in the initial press release. Nevertheless, this did not prevent the media from discovering the identities of many of the targeted individuals as the suits were a matter of public record. Public outrage was swift. One of the 261 individuals sued by the RIAA was 12 year old honor student Brianna LaHara from New York. Brianna’s picture was featured on the front page of the *Daily News* (Sangha, Furman, & Gearty, 2003). Brianna’s mother, Sylvia Torres, became the first person to settle with the RIAA, paying the record labels \$2,000 (Graham, 2003, September 10). A follow-up story in the *Daily News* (Kennedy, 2003, September 11) documented the anger:

Furious music lovers nationwide flooded 12-year-old Brianna LaHara of Manhattan with donations yesterday to help pay off her debt to the recording business. From \$3 pledges for the *Help Brianna* fund to \$1,000 offers, hundreds of people wanted to help pay the \$2,000 settlement between Brianna and the Recording Industry Association of America. "The whole deal with going after the actual consumer - and the fact that it's a 12-year-old girl with a single mother who

lives in the projects - well, these people have no decency," said Taylor Finley, a California film student who started the *Help Brianna* fund. (¶ 1-3)

Then in an inexplicable move, the RIAA either misread this early outpouring of anger or thought they could still win the public sentiment when they encouraged the young girl to issue a public apology through RIAA offices: "I am sorry for what I have done. I love music and don't want to hurt the artists I love" (Rose, Mechlovitz-Rosen, Seigel, & Sangha, 2003, ¶ 2).

Public anger was not limited to Brianna's case alone. It was fueled by press coverage and public sympathy for others caught up in the initial round of lawsuits including a 71 year old grandfather from Richardson, Texas; a star football player at the University of Colorado-Boulder; and a 49 year old California woman unemployed since being injured on the job two years previous. While the public might have sympathized with an industry bringing lawsuits against commercial copyright pirates offering unauthorized goods on the black market there seemed to be less patience for an industry indiscriminately suing music fans. And the bad press wasn't confined to just those cases in which vulnerable or upstanding individuals were ensnared in the litigation—there were also cases wherein the RIAA targeted the wrong individuals. Among the first 261 cases was Sarah Ward, a 66 year old retired schoolteacher from Boston whom the RIAA alleged traded heavily in hip-hop artists like Snoop Dogg (Graham, 2003, September 10; Schwartz, 2003, September 25). Though the case against Ms. Ward was quickly dropped, the RIAA litigation campaign was continually dogged by similar cases of misidentified

defendants.⁶³ It is impossible to determine how many innocent individuals may have been caught up in the RIAA driftnet and forced to settle because of the prohibitively high cost of mounting a legal defense (EFF, 2007).

The RIAA litigation campaign was unprecedented in that it marked the first time that copyright law had been brought to bear on individuals on a mass scale (Borland, 2003, September 8). Until that point, litigants in copyright disputes were likely to be commercial actors of some sort. The legal action initiated by the RIAA dramatically raised the legal burden of millions of everyday people. In a move to temper the public reaction to the campaign, the RIAA launched the so-called *Clean Slate Program*, a kind of amnesty program, to coincide with the commencement of the mass litigation. From the original September 2003 RIAA press release (RIAA, 2003, September 8):

At the same time, the RIAA announced that the industry is prepared to grant what amounts to amnesty to P2P users who voluntarily identify themselves and pledge to stop illegally sharing music on the Internet. The RIAA will guarantee not to sue file-sharers who have not yet been identified in any RIAA investigations and who provide a signed and notarized affidavit in which they promise to respect recording-company copyrights. "For those who want to wipe the slate clean and to avoid a potential lawsuit, this is the way to go," said Mitch Bainwol, RIAA Chairman and CEO. "We want to send a strong message that the illegal distribution of copyrighted works has consequences, but if individuals are willing

⁶³ In one such case a defendant was targeted despite not having been a subscriber to the subpoenaed ISP at the time of the alleged file-sharing ("RIAA Drops Another Case In Chicago Against Misidentified Defendant," 2007, May 3). In another case the RIAA misidentified a defendant based on a spelling error ("RIAA Drops Wilke Case in Chicago," 2006, October 13).

to step forward on their own, we want to go the extra step and extend them this option." (§ 2-4)

The amnesty program was something of a sham however. *Clean Slate* required participants to acknowledge in writing that they had shared music files over the Internet before removing the files from their computers. And though the RIAA stated that it would not assist copyright holders in suing individuals who participated in the program, the major-label members of the RIAA reserved the right to file suit (as did the publishers and recording artists). As senior intellectual property attorney for the EFF Fred von Lohmann (2003, September 10) wrote in the Los Angeles Times, "...once you have come forward, you are more vulnerable to a lawsuit, not less" (§ 3). After months of criticism the RIAA killed *Clean Slate* in 2004 after a paltry 1,108 people had participated in the program ("Music Biz Kills Amnesty Program," 2004, April 19).⁶⁴

The end of the first stage of the RIAA litigation campaign was precipitated by a couple of things. First was a blistering round of criticism from Congress which at this stage in the litigation campaign was displeased with RIAA tactics. As early as August of 2003, members of Congress had expressed concern about the RIAA's impending litigation campaign. Republican Senator Norm Coleman of Minnesota, chairman of the Senate Permanent Subcommittee on Investigations, asked the RIAA to provide detailed information about the 900 DMCA subpoenas it had sent various ISPs around the country. Senator Coleman requested copies of the subpoenas, a description of the standards the RIAA used to file for a subpoena, and a description of the investigatory process the

⁶⁴ The RIAA stated that it would continue to honor the terms of the program for the people who had participated ("Music Biz Kills Amnesty Program," 2004, April 19).

RIAA employed in building their cases against alleged file-sharers. Coleman—an admitted file-sharer at one point in his life—expressed concern about the effects such a campaign may have on both consumer privacy and district court dockets (Dean, 2003, August 1). In September of 2003, the Senate Commerce Committee convened a hearing on the DMCA subpoena process with a panel including RIAA president Cary Sherman, a representative from Verizon, and a representative from SBC Communications. SBC by this time had filed a lawsuit against the RIAA alleging that the subpoenas served to its Pacific Bell Internet Services subsidiary violated consumer privacy and were filed in the wrong jurisdiction (Dean, 2003, August 1, 2003, September 17). Verizon and SBC both thought the RIAA should be required to file individual lawsuits against each alleged copyright infringer and to obtain a judge’s order before asking any ISP to turn over subscriber information. In sum, the ISPs argued that the DMCA subpoena process lacked judicial oversight and was ripe for abuse by the RIAA. Conversely, the RIAA argued that the DMCA was a carefully crafted compromise in which ISPs were granted liability immunity for “the rampant piracy on their networks,” and in exchange the ISPs were obligated to help copyright holders identify alleged infringers (Dean, 2003, September 17, ¶ 3). William Barr, vice president and general counsel for Verizon, asserted however that “Congress hasn’t given this power to the federal government to investigate terrorism. Why should the record industry—private citizens—have this unfettered subpoena authority to reach the most sensitive information people have?” (Gross, 2003, September 17, ¶ 9). Members of the Senate were sympathetic to the ISPs. Republican Senator Sam Brownback of Kansas introduced a bill called the Consumers, Schools, and Libraries

Digital Rights Management Act of 2003 which would have prevented copyright holders from compelling ISPs to turn over subscriber information without first filing a civil lawsuit. Though Brownback's bill was eventually stalled in committee, the RIAA did alter its tactics in the face of tough Congressional criticism.

Congressional resistance to the RIAA litigation campaign proved short-lived however. It is likely that at this early stage in the litigation campaign the ISPs had been more successful in framing the debate as a matter of *privacy* instead of *piracy*. Much of the discussion in Washington had long emphasized the value of competition across industries and in previous confrontations the interests of copyright holders were often seen as an impediment to further innovation. However, the RIAA (and the copyright industries more generally) were quick to realize the importance of framing the discussion in terms more amenable to their interests and moved forward with lobbying efforts. As we will see shortly, the RIAA was eventually successful in shifting the discourse back to piracy as copyright holders and ISPs confronted each other along the structural dimension of signification. Still, the concerns expressed by Congress and ISPs regarding the undue burden placed on the court system by the RIAA's litigation campaign were never really answered and so the issue persisted.

As the RIAA readied its second wave of lawsuits against an additional 204 alleged file-sharers, the trade association decided it would be better to provide these individuals with some warning of the impending legal action—the so-called pre-litigation letters. RIAA president Cary Sherman (Borland, 2003, October 17) stated:

We take the concerns expressed by policy makers and others very seriously. In light of the comments we have heard, we want to go the extra mile and offer illegal file-sharers an additional chance to work this out short of legal action. (¶ 2)

Unlike the initial wave of suits, this time around the RIAA offered those accused of copyright infringement a chance to settle before the suits were actually filed. The association asserted that the pre-litigation notice gave those individuals desiring an immediate settlement the opportunity to do so while giving individuals wishing to contest the accusation the opportunity to make their concerns known. The letters informed recipients of the potential \$750 minimum in statutory damages for each act of infringement and warned them not to attempt to eliminate any evidence of wrongdoing. The letters concluded by stating that the RIAA would file suit unless the recipient responded within 10 days.

The pre-litigation letters were a modest (if meaningless) concession which did little in the way of addressing the concerns of critics. Undaunted, the RIAA thereupon began filing suits on a weekly basis. Yet, the DMCA subpoena controversy had not played out completely. On December 19, 2003, the United States Court of Appeals for the District of Columbia reversed the lower court order against Verizon. Verizon had opposed the RIAA's first subpoena to compel the ISP to turn over subscriber information because Verizon argued § 512(h)(6) did not apply to an ISP acting merely as a conduit for individuals using peer-to-peer applications. Verizon resisted the second RIAA subpoena based on an argument that § 512(h) violates the First Amendment. The appeals court agreed with Verizon's interpretation of the DMCA ISP safe harbor provision but

did not rule on the constitutional question. The court remanded the case back to the district court to vacate its order to enforce the first subpoena and to grant Verizon's motion to quash the second subpoena. In doing so the appeals court reasoned that the authors of the DMCA had not envisioned the advent of peer-to-peer file-sharing, nor had they "draft[ed] the DMCA broadly enough to reach the new technology when it came along" (*Recording Industry Association of America, Inc. v. Verizon Internet Services, Inc.*, 2003). While somewhat sympathetic to the plight of the RIAA, the judges in the case thought that it was not the province of the courts to rewrite the DMCA to fit the new technological milieu. With one decisive blow the appellate court had brought to a close the first phase of the RIAA litigation campaign against individual file-sharers. The Supreme Court later denied a writ of certiorari to the RIAA, effectively giving the appeals court the final word. Still, in the period during which the lower court decision stood, more than 3,000 subpoena requests to ISPs were issued and almost 400 lawsuits were filed (Mark, 2004, October 12). And as the EFF (2007) observed, "Even though the RIAA had used illegal tactics to pursue these lawsuits, none of the defendants who paid received any money back" (p. 5).

ACT 2: JOHN DOE SUBPOENAS

On January 21, 2004, the RIAA returned with a third round of lawsuits against an additional 532 people accused of copyright infringement—marking a transition in the tactics used by the RIAA to pursue alleged file-sharers. This was both the largest group of defendants targeted and the first lawsuits since the court of appeals had ruled that the RIAA's use of the DMCA subpoena process was illegal (Schwartz, 2004, January 21).

Consequently, the RIAA modified its approach by filing “John Doe” lawsuits that identified defendants only by the IP addresses turned up during the investigation (Roberts, 2004, January 21). John Doe lawsuits are a somewhat common type of litigation for cases involving computer networks in which the plaintiffs identify defendants only by the numerical label assigned to a particular device participating in a computer network. In the case of a peer-to-peer file-sharer the numerical label is typically assigned to a subscriber by an ISP. Therefore, the RIAA grouped 532 cases into 4 lawsuits against a number of ISPs—three filed in New York and one in the District of Columbia. The suits were filed in courts close to where the ISPs were headquartered but not necessarily anywhere near where the defendants resided. The RIAA petitioned the courts to issue subpoenas to the ISPs to compel them to provide subscriber information based on the IP addresses they had obtained.

Some critics viewed this modified approach as a genuine improvement over the DMCA subpoena process because it introduced judicial oversight into the process (EFF, 2007). However, there were still a number of very real problems with the new approach. New York City attorney Ray Beckerman (2008, April 9) wrote a comprehensive introduction to the litigation process utilized by the RIAA. His article is the basis for the description that follows. As mentioned previously, a group of John Doe lawsuits were filed in the location of the corporate headquarters of the ISP associated with the IP address turned up during the RIAA’s investigation. The grouping of these “John Does” into a single lawsuit (a legal procedure known as *joinder*) was the first problematic component of the process. The consolidation of large numbers of defendants caused some

legal experts to express concern about the administrative burden this process placed on the federal district courts (Schwartz, 2004, January 21). The basis for joining all of the “John Does” into a single case was also questioned. Furthermore, there was the matter of jurisdiction. The “John Does” themselves may live many hundreds or thousands of miles from the court in which the cases were filed. The RIAA was aware that many of the defendants did not live in the state where the cases were filed and were therefore not subject to the court’s jurisdiction. Nevertheless, the RIAA would make a motion for a discovery order without giving notice to the defendants. This allowed the RIAA to take immediate discovery⁶⁵ by authorizing the issuance of subpoenas to the ISP to compel them to turn over subscriber information. Without any form of prior notice the “John Does” were effectively denied the opportunity to be heard in connection with the motion. They were not provided with the details of the actual suit or the court’s basis for granting the ex parte discovery order and the subpoena.

This put the defendants at a severe disadvantage right from the start. “John Does” received a letter from their ISP informing them that an order had already been granted against them along with copies of the *ex parte*⁶⁶ discovery order and subpoena. In other words, instead of receiving notice that the RIAA was applying for an order against them, defendants were informed of the court order only after it had been decided against them in their absence. Because ex parte proceedings are somewhat controversial, there were a

⁶⁵ *Immediate discovery* is defined as compulsory discovery without delay, at a party’s request, of information that relates to the litigation (Garner, 2006).

⁶⁶ *Ex parte* indicates that the plaintiffs have communicated to the court without giving notice to the other parties to the suit.

few instances in which the RIAA's tactics were called into question by the courts.⁶⁷ Once the "John Does" received the notification letter they typically had about two weeks to file a motion to quash the subpoena. Yet finding a suitable attorney under these circumstances would be extremely difficult. Since the notification did not provide any details about the nature of the actual lawsuit, only attorneys who were already familiar with the RIAA litigation process would be of any use to the defendant. Unsurprisingly, these lawyers were few and far in between. Further complicating matters was the problem of state jurisdiction. Attorneys are typically licensed to practice in only a handful of states. So the defendant was tasked with finding an attorney in the state where the lawsuit had been filed in a very short amount of time in order to make a motion to quash the subpoena. In light of these circumstances, the most likely outcome was a default judgment for the plaintiffs at which point the ISP disclosed the subscriber information behind the IP address. With the subscriber's personal information in hand, the RIAA would drop the suit against "John Doe" and mail the named defendant a settlement offer. If the defendant ignored or refused the settlement offer, the RIAA would file suit in the district court where the defendant resided. In those cases where defendants ignored both the settlement offer and the lawsuit, plaintiffs would typically receive default judgments with statutory awards of \$750 per alleged copyright infringement.

This "John Doe" process was how the RIAA litigation campaign was carried out from 2004-2008. By the end of 2004 the RIAA had filed 7,437 lawsuits; by the end of 2005 the RIAA had filed 16,087 lawsuits. After the total reached 17,587 in February of

⁶⁷ See *Capitol Records v. Does 1-16* in which a judge rejected the RIAA's application because there was no basis for the *ex parte* character (Beckerman, 2008, April 9). And see *Interscope Records v. Does 1-17* in which another *ex parte* motion was rejected.

2006 the RIAA stopped publicizing the number (EFF, 2008). By the end of the campaign the RIAA had filed lawsuits against somewhere between 18,000 and 35,000 individuals. The imprecise number is due to the fact that the RIAA filed suits against numerous individuals twice—once as “John Doe” and then again as a named defendant (Anderson, 2009, July 8). Most of the cases were settled for amounts ranging between \$3,000 and \$11,000. Although the plaintiffs were either the official or unofficial victors in the vast majority of these cases, there was still considerable resistance to the lawsuits which would determine the limits to the effectiveness of the RIAA’s litigation campaign. One such pocket of resistance stemmed from the RIAA’s decision late in the litigation campaign to target university students across the country.

ACT 3: PRE-DOE SETTLEMENT OFFERS

In February of 2007 a letter from the RIAA to an ISP was leaked. The letter revealed that the RIAA was attempting to change its litigation policy to include a pre-Doe settlement option (Beckerman, 2007, February 13; Buskirk, 2007, February 13). The RIAA had begun asking ISPs to assist them in contacting subscribers whom they suspected of illegally sharing files. In doing so the RIAA was attempting to keep the cases out of the courts. The ISPs were asked to contact the “John Does” on behalf of the RIAA to inform them that legal action was imminent. Recipients of these notifications were also told that if they went ahead and turned themselves in to the RIAA to initiate the settlement process, the amount would be discounted to \$1,000. The leaked letter also made mention of an upcoming RIAA web site to facilitate these early settlements—www.p2plawsuits.com.

On February 28, 2007, RIAA chairman and CEO Mitch Bainwol, RIAA president Cary Sherman and RIAA general counsel and vice president Steven Marks hosted a press conference call in which they announced a new anti-piracy initiative aimed primarily at college students (Mennecke, 2007, February 28). The call began with a discussion of financial losses and layoffs in the recording industry and the alleged link to file-sharing among college students. Then the RIAA officials announced the implementation of the already-underway pre-Doe settlement process. They did not disclose any information regarding the amount of the settlement discount. They also made it clear that although the new initiative was directed primarily at university students, it was being put into practice nationwide with private ISPs as well. An RIAA press release (RIAA, 2007, February 28) announced:

The recording industry today launched a new and strengthened campus anti-piracy initiative that significantly expands the scope and volume of its deterrent efforts while offering a new process that gives students the opportunity to avoid a formal lawsuit by settling prior to a litigation being filed. The Recording Industry Association of America (RIAA), on behalf of the major record companies, today sent 400 pre-litigation settlement letters to 13 different universities. Each letter informs the school of a forthcoming copyright infringement lawsuit against one of its students or personnel. The RIAA will request that universities forward those letters to the appropriate network user. Under this new approach, a student (or other network user) can settle the record company claims against him or her at a discounted rate before a lawsuit is ever filed. (¶ 1-2)

The stated focus of the initiative was deterrence and education on college campuses. The RIAA alleged that over half of the population of college students engaged in illegal downloading and were responsible for 1.3 billion illegal downloads of music in 2006 (RIAA, 2007, March 21). RIAA president Cary Sherman summarized by stating:

Because we know that some audiences – particularly campus music downloaders – can sometimes be impervious to even the most compelling educational messages or legal alternatives, these new efforts aim to help students recognize that the consequences for illegal downloading are more real than ever before. (¶ 10)

Also confirmed in the RIAA press release was the launch of www.p2plawsuits.com which “serve[d] as an informational resource for individuals facing a lawsuit” (¶ 11). One commentator (Mennecke, 2007, February 28) remarked on the RIAA’s announcement that day:

The RIAA classified this new initiative as a "win, win, win situation", meaning a win for the person caught, a win for "ourselves" (the RIAA), and a win for the university. Although the content of this new pre-lawsuit letter has not been released, it's doubtful the student will feel like much of a winner after receiving it. (¶ 7)

Additional RIAA press releases followed on a monthly basis, each announcing the number of pre-Doe settlement letters and the number and names of the universities receiving them: 400 letters to 13 different universities in February of 2007; 405 letters to

23 universities in March; 413 letters to 22 universities in April; 402 letters to 13 universities in May; 395 letters to 19 universities in June; 408 letters to 23 universities in July; 503 letters to 58 universities in August; 403 letters to 22 universities in September; 411 letters to 19 universities in October; 417 letters to 16 universities in November; 396 letters to 22 universities in December; 407 letters to 18 universities in January 2008; and in February of 2008, one year into the education and deterrence initiative, the RIAA supplied the final monthly press release for the thirteenth wave of pre-settlement letters—401 letters to 12 universities (RIAA, 2007, April 11, 2007, August 16, 2007, December 6, 2008, February 21, 2007, February 28, 2008, January 10, 2007, July 18, 2007, June 8, 2007, March 21, 2007, May 02, 2007, November 15, 2007, October 18, 2007, September 20).

The weight of such a massive legal action spurred resistance among both students and administrators. In conjunction with the launch of the education and deterrence initiative, the RIAA renewed its college newspaper advertising campaign, featuring full-page advertisements designed by college students. These ads encouraged students to download music from authorized services and informed them of the legal risks to downloading music from peer-to-peer networks (Roach, 2007). The initial RIAA press release (RIAA, 2007, February 28) stated:

The RIAA has also developed an educational advertising campaign targeted for university newspapers. Incorporating concepts developed by marketing students enrolled in RIAA-EdVenture Partners classes, the ads will continue to appear in campus newspapers across the country in the coming weeks....These educational

efforts build upon the RIAA's launch last fall of an orientation video for use by universities available at www.campusdownloading.com. (¶ 11)

For the most part however, students ignored the pre-Doe litigation letters. By March of 2007, the RIAA indicated that 71 percent of students contacted through the initiative had not turned themselves in (Fisher, 2007, March 26). One student who received a pre-Doe litigation letter stated that he did not respond because they offered no proof of the alleged infringement. "It's like receiving blackmail. 'We know what you did, pay us' is the message, but they don't really know me or what I've done" (¶ 3).

In addition to student cooperation, the effectiveness of the RIAA's deterrence and education initiative also hinged on the willingness of universities to go along with the policy. Since the pre-Doe litigation letters were sent before the initiation of a formal lawsuit, universities were under no legal obligation to forward the letters to students. The response of universities to the RIAA's initiative varied—ranging from outright refusal to assist the RIAA in delivering the letters to students, to penalizing students upon receiving the notices (EFF, 2007). Some of the schools cooperating with the RIAA were more aggressive than others: Michigan State University forced two-time offenders to watch anti-piracy videos produced by the RIAA and three time offenders faced possible suspension; Ohio University required two-time offenders to face suspension or probation; and the University of Tennessee terminated Internet access for two-time offenders until the students brought their computers to a facility to have peer-to-peer software deleted from their machines (Cheng, 2007, February 22). Yet many schools were less than enthusiastic about cooperating with the RIAA. During the first two waves of pre-Doe

settlement offers, the University of Wisconsin refused to comply with the RIAA's request. A spokesman for the UW system stated, "But this latest wrinkle—to pass along nonlegal correspondence for a settlement offer—is a different animal, one where we don't see the university, as a public institution of higher education, having a role" (Butler, 2007, ¶ 4). UW sent its students an email reminding them of the "appropriate use guidelines" but refused to forward settlement letters on behalf of the RIAA. Brian Rust, communications manager for the UW Division of Information Technology, stated (Penzenstadler, 2007, March 19) "These settlement letters are an attempt to short circuit the legal process to rely on universities to be their legal agent" (¶ 1). Likewise the University of Maine opted not to forward the pre-litigation letters to its students. Moreover, UM went the additional step of refusing a request from the RIAA to produce the names of students with whom the organization was attempting to settle (Reaves, 2007, March 26). Students at the University of Maine School of Law took up the fight against the RIAA on behalf of their fellow students, asking the court to have the John Doe lawsuit filed against 27 University of Maine students thrown out and to bar the RIAA from filing such suits in the future (Bangeman, 2008, April 2).⁶⁸ In Oregon too, the state attorney general stepped in on behalf of the University of Oregon to contest the RIAA initiative by supporting a motion to quash subpoenas in a file-sharing case involving 17 students (Bangeman, 2007, November 29). And in Boston, U.S. District Judge Nancy Gertner delayed an attempt by the RIAA to subpoena the names of students at Boston University until she could perform an in-depth review. Though Boston

⁶⁸ At issue was the RIAA practice of grouping numerous "John Does" into a single lawsuit. The court eventually found in favor of the plaintiffs (*Arista Records LLC. Et al. v. Does 1-27*, 2008).

University itself was not directly involved in the lawsuit or the legal defense (their students hired private attorneys to quash the request), the case did raise the issue of student privacy protections (Levenson, 2008, April 4).

The response at most universities was decidedly more neutral than these previous examples. Regardless of the position taken by a particular administration, the constant stream of pre-litigation letters increased the administrative and financial burden on universities and fostered resentment among the schools (D'Andrade, 2008, August 11). In some respects the experience at the University of Texas at Austin was typical of the response among large public universities to the RIAA education and deterrence initiative. I discussed the RIAA litigation campaign at length with Thomas Butler, assistant director of Legal Services for Students (LSS) at the University of Texas at Austin (T. Butler, personal communication, August 18, 2010). The University of Texas took something of an impartial stance with regard to the litigation. The university generally assumed the role of an ISP and designated an individual within its IT department as the contact person for alleged DMCA violations. Accordingly, the pre-Doe litigation letters were sent to the IT department which then forwarded the notices to the students. When a student chose to ignore the pre-litigation settlement offer, the RIAA would file a subpoena seeking the student's identity from the university. This subpoena was directed to the Office of Legal Affairs which then forwarded it to the IT department. After large numbers of students began pouring into the Legal Services for Students office, LSS had the Legal Affairs

office forward the notices directly to LSS.⁶⁹ In this way LSS would coordinate with the IT department and Legal Affairs to immediately contact targeted students and offer legal assistance.

The burden placed on the University of Texas was significant. At the height of the litigation campaign the LSS office took on additional staff to handle the volume of students. On two occasions LSS was forced to hold group meetings with students because the RIAA had targeted so many students at once. Occasionally the RIAA would announce a wave of lawsuits during an academic calendar break and the students would return to school with very few days left in the settlement period. On one such occasion LSS secured an extension of the settlement period on behalf of the students. LSS and coordinating departments were also involved in student outreach during this time to warn students of the RIAA litigation campaign. LSS had articles in the student newspaper *The Daily Texan* whenever possible; LSS gave numerous talks on peer-to-peer lawsuits across the campus; LSS addressed student groups, dorms, and greek organizations; LSS was featured on a separate link on the Dean of Students website; LSS was featured in a notice included as part of the student orientation packet; and the Vice President of Student Affairs sent out a mass email to students on the first day of class warning them of the litigation campaign. The IT department was burdened by the additional work of matching IP addresses to student information whether as part of the pre-litigation process or as part of a subpoena. And the students and their families were burdened by the stress of potentially being sued in federal district court. Oftentimes, with the permission of the

⁶⁹ Legal Services for Students was established in 1970 at the University of Texas and staffs attorneys licensed to practice law in the state of Texas. LSS provides high quality legal services to students and protects them from predatory practices.

students, LSS would meet with their clients and their parents simultaneously. Students and their families most often felt compelled to settle with the RIAA for fear of potentially derailing a successful academic career.

It is important to recognize that even though the University of Texas did not systematically challenge the RIAA litigation campaign like some other schools did, there were resources mobilized on behalf of students. At the very least the office of Legal Services for Students raised campus awareness of the litigation campaign and helped hundreds avoid a costly default judgment by settling or, in some cases, even negotiating for a lesser settlement. Moreover, there was considerable coordination across the country as various student legal services at different universities worked together to deal with the RIAA's initiative. I discussed this effort with Robin Unander, President of the University Student Legal Services Association—Western Region (R. Unander, personal communication, February 14, 2011). There are two associations which serve U.S. university student legal services offices. The first is a national organization—the University Student Legal Services Association—which is a subcommittee of the National Legal Aid & Defender Association. The second is a regional organization called the University Student Legal Services Association—Western Region. This organization invites universities west of the Mississippi River to join. Member universities hail from states like Texas, Louisiana, Arizona, California, Oregon, and Washington. During the RIAA litigation campaign the national organization used its listserve to keep members up-to-date on recent interactions with the RIAA and with the relevant published court

opinions. The regional organization went so far as to invite the RIAA to its annual January conference in Lake Tahoe in 2008. Ms. Unander recounted the event:

The Western Region had a conference in 2008 in Tahoe, and the RIAA representatives were invited to attend. They agreed to come, and we agreed to be nice to them....The representatives were very professional and cordial, and provided us with a lot of info about how they are able to determine infringements and why they do what they do. It was pretty eye opening.

The University Student Legal Services Association—Western Region also hosted litigants who had successfully challenged the RIAA at subsequent conferences. All of the members of the organization, including the University of Texas at Austin, were not in favor of fighting the RIAA to protect student identities. They believed the best option for students was to convince them to settle at the earliest stage possible unless there was no way their computer was used to share files—regardless of the particular user of the computer.

One last interesting point about the response of universities to the RIAA education and deterrence initiative is that despite Harvard University having chosen not to disclose student records to the RIAA, the RIAA never followed up with a subpoena to Harvard. Many in the legal community suspected that the RIAA was afraid to take on Harvard (T. Butler, personal communication, August 18, 2010). Some attributed the RIAA's reluctance specifically to a public letter released by Charles Nesson and Jonathan Zittrain from the Berkman Center at Harvard Law School which sharply challenged the RIAA's legal tactics (D. Rosenbaum, personal communication, August 6, 2010). Ms.

Unander indicated that at the Tahoe conference the RIAA representatives were asked why they didn't pursue Harvard. They failed to provide a meaningful response.

As the RIAA moved forward with its education and deterrence program, Congress again weighed in on the litigation campaign. This time however, the RIAA benefitted from a sustained lobbying effort on Capitol Hill through which the recording industry had managed to elevate theft of intellectual property as a fundamental issue of political concern. The public nature of university network infrastructure also mitigated against previous complaints about privacy. In May of 2007, Congress, led by Republican Representative Lamar Smith of Texas, the ranking member of the House Judiciary Committee, threatened 20 universities with unspecified repercussions if they failed to demonstrate what they were doing to inhibit the spread of file-sharing on their campuses (Triplett, 2007, May 2). A bipartisan group of representatives serving on judicial and education House committees sent a letter and a survey to each of the 20 schools. The universities were required to report back to the group at the end of the month. Two months later college officials were successful in a lobbying effort to defeat a Senate proposal which would have required some universities to invest in anti-piracy technologies. Administrators feared that schools which failed to demonstrate compliance with the measure might be denied federal funds. Their success was short-lived however, as a similar proposal was introduced in the House two weeks later (Read, 2007, October 19). The language was contained in a proposed amendment to the Higher Education Act of 1965 and was entitled the College Access and Opportunity Act of 2007. Though the proposed bill died unceremoniously in committee, the Senate and the House voted to

reauthorize the Higher Education Act in 2008 and included provisions requiring universities to provide students with access to authorized music downloading services and to invest in network filtering systems to inhibit the spread of file-sharing on their campuses (Paul, 2008, August 1). The bill was a direct result of a focused lobbying effort by the RIAA and MPAA and passed the House with a wide margin and with bipartisan support in the Senate. There were no explicit repercussions outlined in the bill for those schools that failed to comply with the bill's provisions—but many in the academic community feared that the insertion of penalties in the future was likely.

ACT 4: THE ACCUSED

Despite the fact that most of the people targeted by the RIAA either settled or had default judgments awarded against them, there were important instances in which individuals decided to fight back against the RIAA in court. These cases determined, in part, the limits to the potential of the RIAA litigation campaign. I have already mentioned that in several cases the RIAA targeted the incorrect person and wrongly accused them of copyright infringement. In a related case Candy Chan was sued by the RIAA in 2005 despite having no knowledge or significant experience with computers. Chan did have a 13 year old daughter however, and the RIAA argued that Chan was indirectly liable for her daughter's alleged file-sharing activities. After taking Ms. Chan's deposition, the RIAA asked the court to add Chan's daughter Brittany as a defendant (Beckerman, 2005, September 16; Newton, 2010, January 31). The attorney for Ms. Chan argued that Brittany was a minor and needed to have a guardian ad litem appointed to protect her interests. A motion was made for summary judgment on behalf of Ms. Chan and the

judge granted the motion, dismissing the case against Ms. Chan with prejudice. The judge however, declined to award Ms Chan with attorney's fees. The RIAA's case against Brittany fell apart when the case against her was dismissed after the RIAA refused to pay for the appointment of a guardian (*Priority Records L. L. C., v. Brittany Chan*, 2006). The Chan case was not over though. In September of 2007, Ms. Chan brought legal action in Michigan state court against the plaintiffs in the original lawsuit for abuse of process and violation of the Racketeering Influenced and Corrupt Organization Act (RICO).⁷⁰ The RICO Act has been mentioned in a number of RIAA cases. Ms. Chan argued that Priority Records and their attorneys attempted to extort money from her by continuing to threaten her daughter with further litigation despite the case against Ms. Chan having been dismissed with prejudice. Ms. Chan also argued that the record companies were utilizing the courts for purposes other than to redress their claims of copyright violations (Newton, 2008, July 7). The court dismissed Ms. Chan's claims on procedural grounds and declined to rule on the matter of extortion or abuse of process. But Brittany (with her father's help) went on to lodge a complaint against MediaSentry, the investigatory arm of the RIAA, questioning the legality of conducting an investigation in Michigan without an investigator's license. This prompted an investigation by the Michigan Department of Labor and Economic Growth which in turn encouraged Michigan college students and colleges to follow suit and lodge complaints (Newton, 2009, February 5, 2009, February 7). The state subsequently passed a law that specifically required computer forensics groups to be licensed (Timmer, 2008, September 5). MediaSentry faced similar

⁷⁰ RICO is a federal law providing for extended criminal penalties and a civil complaint for acts performed by criminal organizations.

investigations in North Carolina, Oregon and Massachusetts (EFF, 2008). The same charge was raised in *Lava v. Amurao* wherein the defense argued that MediaSentry's testimony should be barred because they failed to obtain a private investigator license in New York as required by state law (Bangeman, 2008, February 3). Although the judge in this particular case rejected the defense's argument, it did not stop defendants in Oregon, Texas, and Florida from challenging the RIAA's investigatory practices on the same grounds. After becoming a frequent target for civil-rights advocates, the RIAA ditched MediaSentry quietly in late 2008 (McBride, 2009).⁷¹

Making available: the right of distribution in copyright

Other significant legal questions were raised as individuals fought back against the RIAA in court. One of those issues was whether or not simply placing a file in a shared folder violates the copyright holder's right of distribution. The so-called making available issue was raised in *Elektra v. Barker* in New York wherein the judge ruled that an offer to distribute a file on a peer-to-peer network constituted an infringement of the right of distribution. Yet on the same day that the New York judge handed down that decision, a Massachusetts judge ruled differently in *London-Sire v. Doe*, holding that "merely exposing music files to the internet is not copyright infringement" (Lohmann, 2008, April 2, ¶ 1). In reasoning that distribution and publication were not synonymous, the Massachusetts court placed further pressure on the investigatory process used by the RIAA. MediaSentry, being employed by the RIAA, could not effectively prove an alleged file-sharer had engaged in distribution since the copyright holder is not legally

⁷¹ The RIAA stated that it would work with DtecNet Software ApS from Copenhagen moving forward.

capable of violating their own right of distribution. In other words, plaintiffs could not download their own copyrighted materials from a peer-to-peer network to prove copyright infringement. Shortly after the *London-Sire v. Doe* decision, the U.S. District of Arizona denied an RIAA motion for summary judgment against alleged file-sharers Pamela and Jeffrey Howell. The court cited the recent ruling in *London-Sire v. Doe* in arguing that the infringement of the right of distribution requires evidence of actual dissemination of copyrighted materials (Lohmann, 2008, April 29). Unfortunately for the Howells, the court eventually ordered Jeffrey (Pamela was dropped from the suit) to pay the labels \$40,850 for infringing the copyrights on 54 songs because it was discovered by forensic experts hired by the plaintiffs that Mr. Howell had erased his hard drive subsequent to being notified by the RIAA (Healey, 2008, September 2). Sanctions, including default judgment, may be imposed on defendants who fail to provide or permit discovery (*Atlantic Recording Corporation, et al., v. Pamela and Jeffrey Howell*, 2008). The court however, did not rule on the issue of making available.

Attorney's fees

One of the major issues raised in a number of cases (including the Candy Chan case) has been the matter of attorney's fees. Section 505 of the Copyright Law of the United States of America allows for "the recovery of full costs by or against any party" and "may also award a reasonable attorney's fee to the prevailing party as part of the costs". In February of 2005, the RIAA filed suit against Patricia Santangelo, a New York mother of five. The RIAA brought the case despite Santangelo being what the judge in the case referred to as "an Internet-illiterate parent, who does not know Kazaa from

kazoo, and who can barely retrieve her e-mail” (Bangeman, 2009, April 28, ¶ 2).

Santangelo turned over her hard drive to the RIAA during discovery and their forensic investigators discovered Kazaa installed on the machine. Santangelo alleged that the software was likely installed on her computer by a friend of her children. The RIAA subsequently filed suit against two of Patricia’s children—20 year old Michelle and 16 year old Robert (Bylund, 2006, November 3). The RIAA was initially able to obtain a \$30,750 default judgment against daughter Michelle, but that judgment was later overturned. Santangelo’s children eventually settled with the RIAA for \$7,000 total. The RIAA eventually dropped the case against Santangelo in April 2006, but not before Santangelo had racked up \$24,000 in attorney fees. A fundraising campaign provided an additional \$15,000 on her behalf (Bangeman, 2009, April 28). And in April of 2007 the judge in the case denied the RIAA’s motion to dismiss without prejudice and instead dismissed *Elektra v. Santangelo* with prejudice, making it possible for Patricia Santangelo to recover attorney’s fees and costs (Bangeman, 2007, April 10). Buoyed by her victory against the RIAA, Patricia encouraged other victims, “Don’t let your fear of these massive companies allow you to deny your belief in your own innocence. Paying these settlements is an admission of guilt. If you’re not guilty of violating the law, don’t pay” (Newton, 2010, January 31, ¶ 20).

The issue of attorney’s fees also featured prominently in *Capitol Records v. Deborah Foster*. Debbie Foster is an Oklahoma woman sued in November of 2004 for copyright infringement. The RIAA alleged that she shared music over a peer-to-peer network. Ms. Foster acknowledged being the account holder for the IP address in

question, but she insisted she was ignorant of the file-sharing activities. Foster disclosed that either her estranged husband or adult daughter may have had access to the account. The plaintiffs then amended the lawsuit to include Foster's daughter Amanda in addition to Ms. Foster, arguing that Ms. Foster was still liable for secondary copyright infringement since it was her account. Though the RIAA eventually dropped Ms. Foster from the suit and was subsequently successful in securing a default judgment against Amanda, Debbie had filed a counterclaim against the RIAA which she refused to drop. In July of 2006 the court dismissed both the original suit and the counterclaim, declaring Debbie Foster the prevailing party and leaving open the possibility of recovering costs and attorney's fees (Bangeman, 2007, February 7). The court rejected the allegation of secondary copyright infringement because the RIAA had failed to demonstrate that Ms. Foster had induced or encouraged anyone to commit copyright infringement. The case ended badly for the RIAA in July of 2007, as the court awarded Debbie Foster \$68,685.23 in attorney's fees (Bangeman, 2007, July 16). As with Santangelo, the Foster case created problematic precedent for the RIAA. The RIAA would find it increasingly difficult to allege secondary copyright infringement against someone simply because their name appeared on the ISP account in question. Moreover, the case created a potential liability for the RIAA should it chose to pursue such litigation.

Tanya Andersen was singled out by Warner Music, EMI, Vivendi Universal, and Sony BMG in 2005 and accused of being a massive online distributor of copyrighted music. Andersen was a former legal worker and single mother from Oregon living on a medical disability pension with her then seven year old daughter Kylee (Newton, 2008,

March 17). Andersen was accused by the RIAA of distributing copyrighted music using Kazaa—including gangster rap. Andersen flatly denied the charge (Bangeman, 2007, June 4). Andersen claimed that she had always disapproved of file-sharing, but when she purchased her computer she had a friend help her set it up. According to Andersen, the friend installed Kazaa Lite but Andersen never used the software and eventually deleted it. She further claimed that the songs the RIAA accused her of distributing were never on her machine (Newton, 2010, January 31). Undaunted by her protestations, the RIAA continued to pursue Andersen, going so far as to attempt to depose 10 year old Kylee (Newton, 2007, March 28). In October 2005 Andersen filed a countersuit against the plaintiffs, accusing them of abuse of the legal process, malicious prosecution, racketeering and fraud—among other things. In May of 2007, after a forensic expert retained by the RIAA failed to locate any evidence of file-sharing on Andersen’s computer, the defendant moved for summary judgment. Andersen had her case dismissed with prejudice a month later (Newton, 2007, June 5). The dismissal with prejudice effectively exonerated Ms. Andersen and opened the door to a recovery of attorney’s fees. In September of 2007 the RIAA moved to dismiss Andersen’s countersuit (Newton, 2007, September 17). In February of 2008, a federal judge in the District of Oregon dismissed Andersen’s litany of complaints against the RIAA, declaring that they were too broad. Andersen and her lawyer went on to amend the complaint, as requested by the judge, numerous times in their own steadfast pursuit of the RIAA (Bangeman, 2008, May 5). Andersen and her lawyer attempted to get class-action status on behalf of other misidentified defendants swept up in the RIAA driftnet. Then in June of 2008, the RIAA

was ordered to pay Andersen a staggering \$108,000 in costs and attorney's fees (Newton, 2008, June 25). Just months before the court awarded her costs and attorney's fees, Andersen (Newton, 2008, February 22) stated:

It has never been in me to give up fighting because I believe so strongly that what the RIAA is doing is so grossly wrong....The people the RIAA are suing are your average next door neighbors, sister, mother, and child. It's hard to explain to people, who don't know anything about the RIAA, how devastating these lawsuits really are to the average person....I felt violated and felt like I was being treated like a criminal for no reason other than they could....You either fight or pay—it doesn't matter if you're innocent—those are your options. For me, paying them was not a choice, even if I'd had the money. I refuse to pay for something that I didn't do and I told them that from the beginning. I was, and still am, horrified that they are doing this to people. It is unbelievably wrong. (¶ 14)

Jammie Thomas-Rasset

The two cases which have made it all the way to a jury trial are the Jammie Thomas-Rasset and Joel Tenenbaum cases. Though these two cases raise a number of important issues—*making available*, *fair use*, *misidentification*, among others—the most significant impact of these cases has to do with the size of the *statutory damages*. Copyright law permits copyright holders to collect damages in cases of infringement. These damages can be either actual or statutory. Actual damages in cases of copyright infringement are based on both the value of lost income to the copyright holder and profits accrued to the infringer. Because actual damages are typically difficult to calculate

with respect to intellectual property, statutory damages have been included in copyright law since the original Copyright Act of 1790.⁷² Matthew Oppenheim (2010, September 24) explains:

Statutory damages are currently set by copyright law at a minimum of \$750 per work infringed up to \$30,000. And, if the infringement is found to be willful, the ceiling goes up to \$150,000. In certain situations, a defendant can seek to be deemed “an innocent infringer” and have the floor decreased from \$750 to \$200 per work infringed. Over the years, the law has developed a number of factors that should be considered in determining what the statutory damages should be, such as: the value of the work infringed, the harm caused, the benefit to the defendant, the need for deterrence, and the willfulness of the defendant’s infringement. It is left to a jury to decide how to balance these factors and what damages to assess.

(¶ 2)

Jammie Thomas-Rasset (then Jammie Thomas), a Native American mother of three from Minnesota, was sent a settlement letter in 2005 by the RIAA which accused her of using Kazaa to illegally download and distribute 24 songs. Ms. Thomas-Rasset refused the settlement offer and was subsequently sued by the RIAA. The plaintiffs claimed that their investigators detected an individual sharing over 1,700 digital audio files—including many copyrighted songs belonging to the plaintiffs. The labels issued a subpoena to Charter Communications and identified Thomas-Rasset as the account holder associated with the IP address in question. They also noted that the Kazaa user

⁷² Section 2, 1 Stat. 124, 125 of the 1790 Act included a statutory damages provision making an infringer liable for “the sum of fifty cents for every [infringing] sheet which shall be found in his or their possession” (Sheffner, 2010, August 6).

was distributing these audio files under the username tereastarr@KaZaA, a username long employed by Thomas-Rasset for a variety of other purposes. The plaintiffs also accused Thomas-Rasset of intentionally concealing her activities by fabricating a clean hard drive for inspection by the plaintiffs (*Virgin Records America, Inc., et al. v. Jammie Thomas-Rasset*, 2007). Thomas-Rasset denied that she had a Kazaa account and provided conflicting answers with regard to the replacement of her hard drive. On October 4, 2007, a federal jury ruled that Thomas-Rasset was liable for copyright infringement, awarding the plaintiffs \$222,000 in damages. The damages amounted to \$9,250 for each of the 24 songs in question. The judge had ruled prior to the jury's verdict that the record companies did not have to prove actual distribution of the songs and that merely making available the songs for download was sufficient to prove infringement (Leeds, 2007, October 5). However, the judge in the case, U.S. District Judge Michael Davis, declared a mistrial the following year based on the issue of making available. At issue was Jury Instruction No. 15 in which Davis had instructed jurors that making available was sufficient to prove copyright infringement. Davis later rethought his position and, without any encouragement from the litigants in the case, declared that he may have committed a "manifest error of the law" (Kravets, 2008, September 24). He then ordered a retrial despite the protestations of the record companies.

In 2009, on the eve of her second trial, the defense attorney for Thomas-Rasset abruptly withdrew from the case, allegedly due to nonpayment. It was at this point that Camara and Sibley offered their services pro bono to Ms. Thomas-Rasset (Kiwi Camara, personal communication, 2010). Professor Charles Nesson of Harvard Law School had

suggested to his former student Kiwi Camara that he should take up the case. During the second trial the defense focused on a number of issues including the link between Ms. Thomas-Rasset and the IP address identified by the RIAA, the formal copyright registration for the songs in question, and Thomas-Rasset's conflicting testimony regarding the hard drive (Anderson, 2009, June 15, 2009, June 16).⁷³ Ultimately though, the issue of excessive statutory damages took center stage after the jury rejected Thomas-Rasset's testimony and awarded the record companies with a staggering \$1.92 million verdict—\$80,000 for each of the 24 songs in question (Kravets, 2009, June 18). Ms. Thomas-Rasset ("Jury rules against Minn mom in download case," 2009, June 18) responded to the damage award by stating, "There's no way they're ever going to get that. I'm a mom, limited means, so I'm not going to worry about it now" (¶ 7). Then in January of 2010, U.S. District Judge Michael Davis slashed the amount of the statutory damages awarded to the plaintiffs, reducing the amount by 97 percent to \$54,000 (Sandoval, 2010, January 22, 2010, January 25). Despite the jury having selected an award within the legal range for statutory awards, Judge Davis's decision to lower the amount raised the question of the appropriateness of the extremely high damages. Invoking the common law principle of *remittitur*,⁷⁴ Davis wrote "The need for deterrence

⁷³ In February of 2005 MediaSentry sent Kazaa user tereastarr@KaZaA an instant message via the Kazaa user interface notifying the user that they had been caught sharing copyrighted files. Thomas-Rasset allegedly was also notified via a FedEx package sent from her ISP Charter Communications about the infringement. One month after the alleged copyright infringement was detected Thomas-Rasset took her computer to Best Buy and indicated that there was a problem with the hard drive. Best Buy replaced the hard drive under warranty. Thomas-Rasset then produced the new hard drive to RIAA investigators for inspection. In her defense, Camara asserted that Thomas-Rasset had never received notice about the investigation and was simply replacing the hard drive after her son became angry while playing a video game and struck the computer damaging the hard drive (Anderson, 2009, June 15, 2009, June 16).

⁷⁴ *Remittitur* is defined as an order awarding a new trial, or a damages amount lower than that awarded by the jury, and requiring the plaintiff to choose between those alternatives (Garner, 2006).

cannot justify a \$2 million verdict for stealing and illegally distributing 24 songs for the sole purpose of obtaining free music. Moreover, although plaintiffs were not required to prove their actual damages, statutory damages must still bear some relation to actual damages” (*Capitol Records Inc. v. Jammie Thomas-Rasset*, 2010). Because the court relied on the principle of remittitur, the question of the constitutionality of the high statutory awards was not reached in this case. Kiwi Camara (K. Camara, personal communication, 2010) explained the principles of remittitur and constitutionality in this case:

There are two tests. There’s what’s called remittitur which exists in all cases. And basically when the jury award is so excessive that it shocks any kind of educated person then the judge does what’s called remittitur which means he says “well I will not give you that. I will give you this lower number or a new trial”. So that’s what happened in Thomas and [the plaintiffs] said “well no. We’ll take a new trial”....The other argument is under the due process clause. And the Supreme Court has said that due process is denied when in a civil case a monetary penalty is imposed that bears no relation to the harm that was actually done. We take the position that that is the case here. The harm that is actually done is the profit margin on the number of songs that was downloaded. And the damages are, you know, many multiples of that. And not only are they many multiples of that but how many multiples varies by orders of magnitude across cases. To take the most extreme example Jammie Thomas’s first trial gets you a six figure verdict. Jammie Thomas’s second trial gets you a seven figure verdict and Jammie

Thomas under the judge's remittitur gets you a five figure verdict. It's entirely unpredictable and we think that makes it unconstitutional.

Judge Davis reached the damage award of \$2,250 per song by trebling the statutory minimum of \$750 per infringement. Ray Beckerman (2010, October 28) commented on Judge Davis's reasoning thusly:

Judge Davis declined to decide the constitutional issue at all, for reasons which are not clear to me. He then awarded damages which were far beyond the normal range of copyright statutory damages. Were he correct in declining to decide the constitutional question, his copyright law answer should have been that the maximum recoverable was \$750 per infringed work, not \$2250 per infringed work....There is simply no precedent in either (a) copyright law or (b) constitutional law for deciding the maximum range of statutory damages as a multiple of the minimum statutory damages, as opposed to a multiple of the actual damages. (¶ 3)

Ultimately, the lowering of the award did little to settle the case. In November of 2010, after a third trial, another jury awarded the record companies \$1.5 million in their case against Jammie Thomas-Rasset. The award amounted to \$62,500 for each of the 24 songs in question. RIAA spokesperson Cara Duckworth defended the award as necessary to address Thomas's "blatant disrespect for artists, the legal system, and the law" (Moya, February 2011, 25, ¶ 7). Asked about the jury's decision, Camara simply replied "Groundhog Day" (Anderson, 2010, November 3). Yet the Thomas-Rasset affair is far from over, as the case is likely to go up on appeal where another court will decide on

both the issue of the proportionality of damages and the constitutionality of the statutory damages.

Joel Tenenbaum

In 2005, the parents of then 21 year old Joel Tenenbaum received a settlement letter from Sony BMG, Warner, Atlantic Records, Arista Records, and UMG Records alleging that their son Joel had infringed the copyright of 30 songs by sharing them over the Kazaa peer-to-peer network. Joel subsequently sent the record labels a money order for \$500 and told them he could not afford to pay any more than that. The money order was returned. Two years later, in August of 2007, Joel was notified that the record companies had filed suit against him. Tenenbaum offered \$5,250 for the court settlement, but the RIAA refused as they were now asking for \$10,500 (Tenenbaum, 2009, July 27). Then in the summer of 2008, Tenenbaum received a letter from Harvard law professor Charles Nesson offering help. Nesson had been made aware of Joel's situation by District Court Judge Nancy Gertner who had become increasingly frustrated by the large volume of default judgments clogging up the docket as the RIAA essentially used the federal courts as a small claims agency (D. Rosenbaum, personal communication, 2010). With Nesson now as his attorney, Joel quickly filed a counterclaim against the RIAA, arguing that the statute used to sue Tenenbaum, the Digital Theft Deterrence and Copyright Damages Improvement Act of 1999, was unconstitutional (Lipka, 2008, October 31).

From the very beginning, the Tenenbaum defense has been characterized by eccentricity. Tenenbaum's legal defense is itself an outgrowth of Professor Nesson's class, *CyberOne: Law in the Court of Public Opinion*, which examines the social factors

impacting law. Professor Nesson invited Joel and his mother to come speak to the class on the first day of the Fall 2008 semester and then set about assembling a team of law students to collaborate in the defense of Joel. They managed to put together a group of about half a dozen law students that first semester, with the team reassembling each subsequent semester with new members. Harvard Law School requires its law students to complete 50 hours of pro bono work before graduation, so the students availed themselves of a clinical set up to ensure that they would receive class credit as well as pro bono hours for collaborating on the defense. Team Tenenbaum wasn't limited to just law students however; journalism, computer science, and design students all contributed to the effort. Probably somewhere in the neighborhood of two dozen students have now worked as a part of the team (D. Rosenbaum, personal communication, 2010).

Nesson and his law students immediately recognized that the Tenenbaum case was being fought not only in the courtroom but in the court of public opinion as well. While the legal case was much more difficult, the battle for public opinion was an easier case due to the resentment engendered by the RIAA's tactics. Consequently, Team Tenenbaum created *JoelFightsBack.com* as the lynchpin of their communication and public relations effort. Debbie Rosenbaum (personal communication, 2010) of Team Tenenbaum explains:

The idea behind it was to allow for a forum. We were getting so many press calls and so many random people reaching out to us in various ways who either wanted to express support or to yell at us and tell us we were stupid and ignorant and ruining society. We really wanted to create a centralized forum for people to get

in touch with us and to express their own opinions as well as for us to communicate one-to-many. Rather than me having to talk to twenty journalists I could post something on JoelFightsBack and/or the Twitter feed and they had the information immediately without me having to call each one individually. So the idea was kind of multifold. It also seemed appropriate that in a case that was fundamentally about new media and the Internet that we have an Internet presence.... But the idea is for us is...twofold...for us to communicate with journalists and post legal documents and for us to communicate to many.... And we welcome dissent on the website just as much as we welcome people who pledge undying support and love. The fact that it has generated debate I think is part of Professor Nesson's [plan]. His underlying purpose in this is that the law may not change in the courtroom. It may need to go to the legislature. But unless you have people who are demanding change, copyright isn't at the forefront of the legislature's concerns unless you have a lot of people clamoring for it to change.

In addition to serving as a communications platform the website also has been used to raise money for Joel's defense. Similar to the way in which file-sharers and outraged members of the public came together in the online fundraising efforts for Patricia Santangelo, JoelFightsBack has successfully raised thousands of dollars for Joel's defense. According to Debbie (personal communication, 2010), they have raised four or five thousand dollars, mostly in increments of ten and twenty dollar donations. She suspects that much of the money comes from file-sharers angry with the RIAA. People from all over the world have donated, including a \$500 dollar donation from a

German tech organization. All of the money has gone towards subsidizing the costs of the defense. Rosenbaum explains:

...it turns out ordering transcripts of depositions and court documents is really expensive. So Professor Nesson has fronted quite a bit of the money. But all of the money that we've raised has gone towards subsidizing the legal costs that we have so that not all of it comes out of our personal pockets.

Another interesting use of JoelFightsBack was an experiment Team Tenenbaum carried out in collaborative lawyering. At one point Nesson and his students were preparing to file a brief with the court and took the novel step of posting the brief to their website and soliciting feedback. The move generated scorn from some in the legal community. Again Rosenbaum (personal communication, 2010) explains:

We were filing something on Joel's behalf and...we decided it would be a really interesting...to test the wisdom of crowds....So we posted a draft of one of our files online and said "give us feedback". You know, "how would you make this better," which is unheard of in the legal community because it violates a million different professional rules of responsibility. And there were legal ethics blogs that basically were like, "Professor Nesson and all of his students should be disbarred. Any student who is not even barred should not ever be permitted to be barred". And so yeah we believe in...radical transparency—maybe to an extreme. But Professor Nesson just believed that just because it's always been done this way doesn't mean that's the way it has to be done. So transparency for him has really underscored all of his efforts and all his decisions. It's part of his

personality but it's also part of the approach you have to buy into if you want to work on the case.

As part of the endeavor to put the RIAA on trial in the court of public opinion, Team Tenenbaum filed a motion in January of 2009 to have the court proceedings broadcast live over the Internet. Judge Gertner approved the motion. The plaintiffs quickly appealed the motion to the U.S. Court of Appeals for the First Circuit, arguing that a webcast could negatively impact public opinion. In a telling moment, the RIAA indicated that it feared the proceedings would be re-edited and distributed online, creating a PR disaster for the trade association (Newton, 2009, January 21). The court of appeals reversed Judge Gertner's decision. Rosenbaum (personal communication, 2010) commented on the decision and the outpouring of support they had on this particular matter:

...when we were going to go to trial there [were] already cameras in the courtroom. We just wanted it to go live over the Internet which the RIAA appealed and then the First Circuit overruled Judge Gertner's decision to allow it to be streamed live over the Internet. And so when it was appealed we were trying to solicit as many amicus briefs as we could. And we had the support of the New York Times, the AP. EFF really came through and we were connected with them then to kind of garner support from related technology organizations which would have a vested interest in this case being broadcast live over the Internet. And really everybody was on board with it being broadcast live over the Internet except for the RIAA. And then the Supreme Court refused to hear it.

Notwithstanding the sporadic support Team Tenenbaum has received from the press, the public, and institutions like the Electronic Frontier Foundation, the group has weathered blistering criticism from many in the legal community for their handling of the case. Professor Nesson's eccentric approach has put him at odds with many people, even those sympathetic to the victims of the RIAA driftnet. In one instance, Nesson published a series of email exchanges with dissenting colleagues he had hoped to call as expert witnesses for the defense but who rejected his reliance on fair use as part of the defense (Saltzman, 2009, April 8). This level of transparency was objectionable to many, including noted copyright attorney and blogger Ben Sheffner who commented:

It's off the charts, in terms of unconventionality of litigation tactics, and I'm being kind. The stuff about posting internal discussions with his experts on the merits of the case is unheard of. I can't imagine any lawyer on earth revealing that his own experts think that his case is seriously flawed. (¶ 8)

Judge Gertner herself expressed dissatisfaction with Nesson's handling of the case, citing missed deadlines, rules violations, and his unauthorized tape-recording of opposing counsel and the judge at pretrial hearings and legal proceedings (Saltzman, 2009, December 7). Debbie Rosenbaum (personal communication, 2010) commented on Nesson's handling of the case:

He's not interested in precedent. So [in] one of the briefs that we filed to the appellate court, which is a super respectable court, we didn't cite a single case. We cited the book of Solomon and the Constitution. And the rest of the legal community looked at us and was like "what the hell are you doing? This isn't a

joke! You can't just file a motion or brief and make an argument based on the Bible and the Constitution. You have to cite case precedent and laws." And Professor Nesson was disinterested in citing those.

Ultimately, the trial ended poorly for Tenenbaum. In July 2009, the plaintiffs were awarded \$675,000 in damages for the 30 songs at issue. The award amounted to \$22,500 per song. The defense had suffered a series of setbacks which all but guaranteed the verdict: Tenenbaum's counterclaim had been dismissed by Judge Gertner; four of the defense's expert witnesses had been excluded; and the defense was prevented by the court from arguing fair use. By now a graduate student of physics at Boston University, Tenenbaum indicated after the trial that he did not have the financial resources to pay the judgment (Sheffner, 2009, July 31). However, just as in the Thomas-Rasset case, the size of the award was immediately called into question by the court. Judge Gertner had previously indicated that there would be a post-trial proceeding to determine the constitutionality of the size of the award. The defense argued that the statutory award in the case amounted to a violation of the due process clause in the 14th Amendment. The original counterclaim entered by Tenenbaum contended that the plaintiffs did not file suit in order to obtain compensation for any purported injury, but rather to extort a settlement from him or make an example out of him. Similarly, the defense later argued that while statutory damages in copyright cases had originally served to compensate victims in cases where real harm was inflicted but actual damages were difficult to determine, the plaintiffs in this case were attempting to depart from this tradition and use copyright statutory damages as part of a deterrence scheme. Moreover, the defense argued that the

14th Amendment disallowed damage awards that are excessive in relation to the interests violated in a particular case (Chad & Schultz, 2009). In July of 2010, Judge Gertner invalidated the jury's award, reducing it by 90 percent to \$67,500—or \$2,250 for each of the 30 songs at issue. In a move similar to Judge Davis in the Thomas-Rasset case, Judge Gertner relied on a trebling of the minimum amount of statutory damages permitted by the Copyright Act. But whereas the judge in the Thomas case relied on the common law principle of remittitur, Judge Gertner's ruling hinged on the constitutional question. As Professor Nesson (personal communication, 2010) explains:

...the issue was crystallized after it had been around the merry-go-round once already out in the Thomas case. So what happened was the judge out in the Thomas case gets the outrageous verdict, he remits it down, he says to the plaintiffs, that is the record labels, "would you accept this lower verdict?" And they said no. And so he had to have a new trial. So they've had three trials already out there. And they're just going around in circles. So Judge Gertner here said to them, "you know if I remit and I say to you 'would you accept this?' Will you turn it down?" And they basically told her "yes. That's what we'll do. We will turn it down." She said "well in that case you leave me no choice but to reach the Constitutional question of whether outrageous damages are Constitutional."

However, not everyone bought in to the judge's reasoning. Ben Sheffner (2010, August 6) criticized the ruling, stating:

But Judge Gertner did not treble the amount of actual damages she found (\$1 per song), but instead trebled the minimum amount permitted under the Copyright

Act, or \$750...In other words, she did not treble the amount of actual damages; she actually multiplied it by 2,250, an act that seems particularly arbitrary, and that finds little support in logic or the case law. (3-4)

This is the point echoed by Ray Beckerman (2010, October 28) who commented that, “There is simply no precedent in either (a) copyright law or (b) constitutional law for deciding the maximum range of statutory damages as a multiple of the minimum statutory damages, as opposed to a multiple of the actual damages” (§ 4).

The record companies indicated immediately their intention to appeal the decision. So the Tenenbaum case is far from over. A few weeks after the decision, a playlist of the 30 songs in question was featured on the Swedish file-sharing service The Pirate Bay. “The \$675,000 Mixtape” was featured next to a picture of “DJ Joel” and the caption “Approved by the RIAA” (Saltzman, 2009, December 7).⁷⁵ As for what the future holds for Joel’s defense, Nesson (personal communication, 2010) indicated that the defense will hone in on the constitutionality of the statutory damages in the case:

The story that we will tell will be of a judicial train wreck—judicially created—when the Supreme Court said the initial assignment by the Congress of the power of giving damages to judges would be transferred to juries. The Supreme Court had no authority to transfer that authority to juries. Congress never gave that authority to juries. They gave it to judges because judges are people of some experience and wisdom and kind of know what they are doing. So they gave it to judges with complete discretion, wide discretion to apply it to small cases and big

⁷⁵ The record labels actually asked Judge Gertner to order Tenenbaum to stop promoting illegal file-sharing because he had linked to the “\$675,000 Mixtape” from *JoelFightsBack*. Judge Gertner denied the request in December of 2009.

cases. Leave it to judges to understand which was which. And then the Supreme Court takes this power and gives it to juries. Well they had no authority to do that. And if they insist that they've done it, they've done it in a way that they wouldn't allow Congress to have done it had they passed the statute that way in the first place. Imagine a statute that allows a private corporate litigant to sue an individual who has caused no actual damage and without proving any actual damage collect a damage award calculated for purposes of general deterrence and leave it completely to a jury to say how much. There's no standard. It's completely arbitrary. It's not thinkable that such a statute would in fact be passed. And the idea that they interpret this statute to mean this they have to confront the fact that it's unconstitutional.

DÉNOUEMENT

In December of 2008 the RIAA announced the end of its litigation campaign targeting individual file-sharers. The RIAA indicated that it had worked out preliminary agreements with a number of major ISPs which would cooperate with the trade association in copyright enforcement (McBride & Smith, 2008, December 19). Under the arrangement, ISPs would forward a series of emails to customers believed to be engaging in file-sharing. If they believed the customer was ignoring the warnings, their Internet service would be slowed and eventually cut off. And though the RIAA stated that the litigation campaign was officially over, they would move forward with existing cases while reserving the right to bring suit against egregious file-sharers in the future. Critics however wondered whether the bad PR generated around high profile file-sharing cases

had factored into the RIAA's decision ("Keeping pirates at bay," 2009). Some commentators attributed the termination of the litigation campaign directly to the legal setbacks suffered by the RIAA in the months leading up to the announcement (Chad & Schultz, 2009). Fred von Lohmann (2008, December 19) of the Electronic Frontier Foundation stated, "The campaign has been, by any measure, a failure. The lawsuits have not reduced unauthorized file-sharing and have not gotten a single artist paid" (§ 3). For its part the RIAA responded that while the litigation had not put a stop to file-sharing that had never been the goal of the campaign. Instead, the lawsuits were about raising public awareness of the illegality of file-sharing. Many of the early comments by RIAA officials like president Cary Sherman (Gross, 2003, September 17) seem to support this contention:

Up until recently, people didn't even think twice about downloading music, and didn't even worry about whether it was right or wrong, legal or illegal. The result of these lawsuits...has been to inform more people in the space of a week that this conduct is illegal than anything we have [done], notwithstanding a multiyear education program. (§ 23)

When asked for his thoughts on the reasons for the abrupt end to the RIAA litigation campaign, Charles Nesson (personal communication, 2010) of Team Tenenbaum stated:

Their campaign from the beginning was conceived and has been executed as an education campaign. That is, they are in court but they are in court as a kind of stepping stone to the court of public opinion. Their litigation campaign is as much

advertising as it is litigation. They wanted to project a message that it's not okay to share copyrighted music. And they were immensely successful with that. And you know people kind of judge what they set about as if their goal was to stop downloading. They weren't going to stop downloading and they knew it. Their goal was to project an idea out into the society that was from their point of view in need of articulation. And they did it. So campaign over.

Likewise, Kiwi Camara (personal communication, 2010), counsel for Jammie Thomas-Rasset, responded:

Well they had done the damage. People were aware of the threat and I think the people who were going to be deterred by it were deterred by it. Going forward it just costs them more money and it gets them no extra deterrence bonus. So I think now the question really for the courts is just, "was that okay?" Because if it is okay then we'll see it again and again by other industries as we're already seeing with these independent movies.

CONCLUSION

The Thomas-Rasset and Tenenbaum cases continue to wend their way through the legal system as do a number of other file-sharing cases. Though only two out of the roughly 35,000 cases have yet to make it to a jury trial, the efforts of a very small group of defense attorneys did play a decisive role in the way that the RIAA litigation campaign played out—both in the courtroom and in the court of public opinion. Three groups of attorneys emerged to take the lead in defending individuals caught up in the RIAA driftnet—Ray Beckerman, Camara & Sibley, and Charles Nesson. These attorneys built

on the momentum established by the resistance of others—student legal services, law students, university administrations, state agencies, member of Congress, and major ISPs.

At a number of junctures in the litigation campaign the courts were required to rule on the legitimate and illegitimate uses of communication systems. This matter arose at the outset of the campaign with the first subpoena issued to Verizon in July of 2002. The district court first ordered Verizon to comply with the RIAA subpoena requesting the identity of its customers. According to the district court's interpretation of the DMCA, the interests of copyright holders trumped the concerns of ISPs who worried about maintaining privacy for their consumers and the costly administrative burden of complying with RIAA subpoenas. Verizon was joined in their fight against the RIAA by SBC and Charter Communications. And when the Court of Appeals for the District of Columbia Circuit reversed the lower court order based on the ISP safe harbor provisions in the DMCA, the RIAA was forced to change tactics. Likewise, there was conflict over the legitimate and illegitimate use of communication systems in the context of university networks. Though the responses of universities to the RIAA litigation campaign varied widely, the RIAA faced serious resistance by university students, faculty, and administrations who all imposed effective limits on the success of the RIAA's education and deterrence initiative. Schools like the University of Wisconsin and the University of Maine at times refused to pass on pre-litigation letters to their students. Even in places like the University of Texas at Austin where the university cooperated with the RIAA, resources were made available to students in an attempt to blunt the impact of RIAA litigation on students and their families. However, it might be equally said that

universities which encouraged and facilitated settlements in these cases helped to keep the administrative costs of the RIAA to a minimum by keeping these cases out of the courtroom.

Similarly, the conflict over the legitimate and illegitimate use of court resources constrained the effectiveness of the RIAA campaign. Right from the start the RIAA's tactics were challenged by ISPs who saw them as an abuse of the courts' jurisdiction. Closely tied to the matter of jurisdiction was the joinder of mass numbers of people in single court filings. This practice fueled discontent among a number of judges and politicians concerned with the choking of the federal court dockets. Equally important was the appropriateness of using copyright law to target individual noncommercial actors. The *ex parte* proceedings attracted the attention and sympathy of lawyers, the media, and the public to the plight of those caught up in the RIAA's driftnet. And in the two most prominent cases—the Thomas-Rasset and Tenenbaum jury trials—the staggeringly high statutory damages were seen as a gross miscarriage of justice by many, including the judges in each case. In fact, there is good reason to believe that the antipathy produced by what many considered to be the RIAA's abuse of the legal process made judges more willing to award attorney's fees and costs to defendants.

Together all of these factors made it no longer cost effective for the RIAA to continue with its campaign targeting individual file-sharers. In terms of the appropriate use of communication systems the RIAA was forced to sit down with ISPs and work out a compromise approach to the enforcement of intellectual property regimes online. With respect to the appropriate use of court resources the high cost of the protracted Thomas-

Rasset and Tenenbaum cases combined with the potential for the award of attorney's fees and costs to defendants dramatically increased the financial liability of the RIAA's approach. However, the legitimate and illegitimate use of informational and cultural goods was never substantially challenged during this campaign. Any substantial recognition of anything other than the rights of the individual possessive subject would be to question the very legal foundation of the social relations which define capitalist society. Kiwi Camara briefly called into question the registration of copyrights by plaintiffs in the Thomas-Rasset case, but this was more a matter of formality than substance. And Professor Nesson was prevented from arguing fair use in the Tenenbaum case altogether. In effect, the monopoly of control by the plaintiffs in these cases over the music in question went unchallenged. In none of these cases was there a defense of the practice of file-sharing. Of all the individuals mentioned here, only Joel Tenenbaum is an unrepentant file-sharer. In most of these cases the attorneys reached out to their clients to counter what they saw primarily as an abuse of the legal process. And while there is a sufficient supply of political and public sympathy for ISPs and the individuals caught up in the RIAA driftnet, file-sharers, for the most part, are still an anathema.

Chapter 6 File-Sharing Litigation Redux

The RIAA officially abandoned its litigation campaign in August of 2008 in favor of a graduated response program in cooperation with U.S. ISPs (McBride & Smith, 2008, December 19). Representatives from the RIAA confirmed this when they informed Congress that the organization had “discontinued initiating new lawsuits in August” (Beckerman, 2009, May 3, ¶ 2). Yet by May of 2009 it appeared that the RIAA had filed over 60 new cases in federal district courts seeking statutory damages against alleged file-sharers (Beckerman, 2009, May 3; Newton, 2009, May 11). The apparent contradiction may be explained, at least in part, by the RIAA’s insistence that it would continue litigating cases already in progress. In fact, noted IP attorney and copyright expert Ben Sheffner indicated that dropping the cases might cause problems for the RIAA (Anderson, 2009, March 9). Sheffner observed “...if they abruptly drop actual ongoing suits, the courts will get annoyed at them, and could be sympathetic to motions for attorney’s fees, counterclaims for abuse of process, malicious prosecution suits, and the like” (¶ 20). RIAA spokesman Jonathan Lamy bizarrely explained the RIAA’s decision to continue with the litigation as a matter of equity among the accused:

We’re obviously pleased to transition to a new program going forward but that doesn’t mean we can give a free pass to those who downloaded music illegally in the past. How fair would it be to the thousands of individuals who took responsibility for their actions and settled their case while others are let off the hook? We’re still in the business of deterrence and it must be credible. (¶ 17)

Leaving aside the question of whether or not the RIAA was justified in announcing an official end to their litigation campaign while ongoing suits continued to work their way through the courts, the mass targeting component of the litigation campaign had, by and large, come to an end. But that does not mean that the mass targeting of individual file-sharers has stopped with the RIAA's efforts. In the pages that follow I detail the current status of both file-sharing technology and contemporary legal efforts to contain that technology. The BitTorrent file-sharing platform differs from the Gnutella and FastTrack protocols in a number of significant ways. Accordingly, an overview of the BitTorrent protocol is presented here. This is followed by a discussion of the recent wave of litigation targeting BitTorrent users. I conclude by arguing that perhaps the most significant impact of the RIAA campaign has been its use by other industries as an economic model of litigation to turn a profit from piracy.

In the aftermath of the RIAA's unprecedented litigation campaign the music industry found itself in a grim economic environment. According to Nielsen SoundScan, physical CD sales declined another 20% in 2010. And while there was a 13% uptick in digital album sales it was not remotely enough to make up for the overall decline in sales (Moya, 2011, January 7). On the other hand, between 2009 and 2010 the MPAA reported an 8% increase in worldwide box office revenue of \$31.8 billion. In fact, it was a record-breaking year and the fifth year in a row in which box office receipts surpassed the previous year (Moya, 2011, February 25). The substantial growth in box office revenues was also accompanied by an aggressive campaign by the MPAA to combat file-sharing

worldwide. Much of the motion picture industry's attention has been focused on a newer generation of peer-to-peer file-sharing technology.

About half way through the RIAA litigation campaign it was estimated that peer-to-peer file-sharing accounted for as much as 35% to 75% of Internet traffic (McDaniel, 2010, June 10; Yu, Li, Hong, & Xue, 2006). More recently some commentators have observed that peer-to-peer file-sharing is declining as a percentage of overall Internet traffic. One study indicated that in the final years of the RIAA litigation campaign—between 2007 and 2009—peer-to-peer traffic decreased 71% as a percentage of overall Internet traffic (Ortiz, 2011, February). However, this decline is the result of a rise in streaming Internet video as a percentage of overall Internet traffic and not because of any decrease in the volume of peer-to-peer traffic (Ernesto, 2010, October 6). In fact, according to the Cisco Visual Networking Index, the volume of peer-to-peer traffic is predicted to grow to more than 7 petabytes per month by 2014 (McDaniel, 2010, June 10). In other words, though peer-to-peer may only account for 17% of total Internet traffic in 2014 that would still represent roughly double the volume of today's peer-to-peer traffic. The same index predicts regional growth rates in peer-to-peer traffic of 21% in North America, 35% in Central Eastern Europe, and 15% in Western Europe. The Asia-Pacific region will continue to account for nearly half of the volume of peer-to-peer file-sharing traffic.

BITTORRENT

Most of the RIAA suits targeted people using either the FastTrack or Gnutella peer-to-peer protocols. Today, these protocols have in large part been displaced by the

BitTorrent peer-to-peer protocol. BitTorrent was developed by Bram Cohen in 2001. After some limited beta-testing, Cohen presented the protocol at a hacker conference in 2002 (Thompson, 2005, January). Cohen released BitTorrent under an open-source license, making the source code available for others to tinker with and distribute for free (Roth & Ryan, 2005, October 31). BitTorrent was quickly embraced by a number of content providers (including Blizzard Entertainment—makers of World of Warcraft) and Linux distributors as a scalable means for delivering content by decreasing the load on central servers and minimizing costs (Xia & Muppala, 2010). During the RIAA litigation campaign it was estimated that BitTorrent may have accounted for somewhere between one fifth and one third of overall Internet traffic (Roth & Ryan, 2005, October 31; Thompson, 2005, January). More recently, Cohen's company BitTorrent Inc. announced that they have 100 million active monthly users and average over 20 million daily users from over 220 countries (Moya, 2011, January 3).

BitTorrent is a third generation peer-to-peer file-sharing system which differs in several key respects from its predecessors. Recall that peer-to-peer platforms like Kazaa and Gnutella included a search function designed to locate peers within the network possessing a given file. When the desired file was located, a direct connection was established between peers and transfer was initiated. A problem for these older peer-to-peer systems was that most ISPs did not provide their customers with equivalent uploading and downloading speeds. Upload rates are typically much slower than download rates and produce a bottleneck in file-sharing as uploading peers can only provide access to a given file at a fraction of the rate available to downloaders. In other

words, sharing a file directly between two peers was inherently inefficient (Thompson, 2005, January).

On the other hand, BitTorrent was designed to facilitate cooperation among groups of peers using a technique known as *segmented downloading* or *swarming download*. In this system files are divided up into segments and distributed among peers. There is no search function within BitTorrent client applications to locate these segments. Rather, peers consult web-based search directories to locate pieces of a desired file. Peers that are interested in downloading the same file are then organized into overlay networks known as torrents. Rather than producing a bottleneck in access, as more peers join the torrent the download rate for all the peers actually increases (Xia & Muppala, 2010). While direct transfers between two peers may have been efficient enough for sharing MP3 files, the ability of the BitTorrent protocol to more efficiently utilize upload capacity makes it an ideal platform for sharing larger files like video and software (Levy, 2005, November 28).

BitTorrent is utilized by a variety of organizations and companies as a more efficient means of content distribution than centralized client/server systems. In addition to Blizzard Entertainment and Linux distributors, BitTorrent has been utilized by Activision, Sun Microsystems, and Wikipedia (Ortiz, 2011, February; Roth & Ryan, 2005, October 31). Although BitTorrent offers considerable advantages, it is not without its own problems. For example, the unstable topography of peer-to-peer networks requires that publishers provide a stable content source on the network. Since BitTorrent users are likely to leave the network once they have completed a download, publishers

must consistently provide all the necessary segments to reproduce the file. Moreover, the capacity of BitTorrent to transfer large files means that in addition to copyrighted music it can also be readily used to share copyrighted video content.

The RIAA did not target any BitTorrent companies during its barrage of litigation against the commercial distributors of file-sharing software. Nor did BitTorrent factor into the RIAA litigation campaign targeting individual file-sharers in any meaningful way. This has not stopped the MPAA from targeting BitTorrent however. The MPAA began legal action against the web-based search directories which BitTorrent relies on as early as 2004 (Locklear, 2004, December 14). Yet Bram Cohen and his BitTorrent Inc.⁷⁶ have thus far avoided any substantial legal entanglement with either the RIAA or MPAA. It's possible that Cohen's careful courting of Hollywood may have worked to his favor (Levy, 2005, November 28).⁷⁷ But it's more likely that the absence of litigation targeting BitTorrent developers is due to the particular way in which BitTorrent is structured. Certainly its utilization by prominent companies like Blizzard and Sun helps to establish the existence of substantial noninfringing uses. But this same structure does present more opportunistic targets for litigation. BitTorrent was not designed to provide users with anonymity and the ease with which IP addresses can be discovered in BitTorrent networks has resulted in renewed efforts to target individual file-sharers—though not by the RIAA or MPAA. To understand recent legal developments a more detailed explanation of the BitTorrent protocol and its functions is required.

⁷⁶ BitTorrent Inc. is based in San Francisco and is responsible for the ongoing development of the BitTorrent protocol.

⁷⁷ It was reported that Cohen attended a meeting in 2005 with then MPAA President and CEO Dan Glickman.

BitTorrent can accurately be described as a *distributed file swarming protocol*. BitTorrent is able to achieve greater efficiency relative to previous peer-to-peer systems because users are not required to wait until they have downloaded a complete file before they are able to share this content with others. BitTorrent splits files into smaller segments and hashes each segment at which point users are able to download individual pieces of the file. As soon as a user has downloaded a segment of the file, the user is able to immediately begin uploading that segment to other peers who have not yet acquired it. All the while the user is able to seek out other peers possessing needed segments and begin simultaneous downloads of the missing pieces of the file. The group of peers involved in the sharing of the complete file is known as a *swarm* and the overlay of data flowing between the peers is called a *torrent* (Kelly, 2006, April 13). Users look for files with the extension *.torrent* which have been uploaded to a web server known as a BitTorrent *index*. The torrent file contains integrity metadata about the segments of the original file.

The torrent file also contains information about another type of BitTorrent server known as a *tracker*. A tracker facilitates communication between peers. BitTorrent peers contact trackers to locate the IP addresses of other peers who are participating in a particular torrent. The tracker answers these requests by sending a list of about 50 neighboring peers picked randomly from the group of active peers in a given torrent. A peer seeking to join a torrent then connects with between 20 to 40 peers from a list of about 50 peers returned by the tracker. The peer then establishes bidirectional communication to begin sharing a segmented file (Xia & Muppala, 2010). Trackers are,

in a sense, the weakest link in the BitTorrent network. A failure in the tracker's function makes it impossible for new peers to join a torrent and for existing peers to locate each other. Peers in BitTorrent are of two sorts: *leechers* and *seeds*. Leechers are peers who do not have the complete set of segments for a file and therefore must download these parts from other peers. Seeds are peers who have the complete set of the segmented file and offer it for download to others. Xia and Muppala (2010) summarize as follows:

The application is implemented as a hybrid P2P system, with most of the interaction directly among the peers, but requiring occasional interaction with a server for locating peers. The BitTorrent protocol requires peers to organize themselves into an overlay network, with connections among the peers, for each file being distributed. This overlay network is called a Torrent. Each file being distributed by BitTorrent requires the establishment of separate torrent. Besides the peers, a tracker and a web server play an important part in file distribution using BitTorrent.

The tracker is a special infrastructure node which stores meta-information about the peers that are currently active within a torrent. Peers interact with the tracker using a simple protocol layered on top of HTTP in which a peer sends information about the file it is downloading and the port number to the tracker. The tracker does not participate in the actual distribution of the file, but only serves the purpose of enabling peers to find each other. The peers that are part of a torrent can be classified into two types: a seed and a leecher. A seed is a client that has a complete copy of the file and remains in the torrent to serve other peers. For a

torrent to get started, we need at least one initial seed that provides the entire content for download. A leecher is a client that is still downloading the file. (2)

As indicated in Chapter 4, the problem of free-riding was significant in both the FastTrack and Gnutella peer-to-peer systems. To deal with free-riding BitTorrent was designed as an incentives-based file-sharing platform. BitTorrent discourages free-riding by incorporating a *tit-for-tat* approach into its peer selection strategy. Generally speaking, a peer participating in a torrent will favor other peers who download to it. In other words, peers that are uploading are likely to achieve faster download speeds relative to peers that are not uploading. BitTorrent provides another mechanism to promote sharing while discouraging free-riding known as *choking*. Xia and Muppala (2010) explain:

A peer downloads pieces not only from the seed(s), but also from other peers, thereby substantially reducing the load on the seed(s). A peer usually can serve four peers simultaneously, and it chooses the best four peers to unchoke and chokes other requesting peers. Choking is a temporary refusal to upload, but the connections are not closed. (2)

Optimistic unchoking is a process whereby BitTorrent peers discover other peers with faster upload rates. Periodically a peer will choose another peer at random and unchoke it to see if it will upload at a faster rate than any of the four peers currently being served. If it does, that peer will replace the slowest of the existing peers. Ultimately, researchers differ on whether or not these mechanisms function effectively to discourage freeriding on BitTorrent networks (Li, Yu, & Wu, 2008; Xia & Muppala, 2010; Yu et al.,

2006). That being said, BitTorrent is currently the most popular file-sharing system and dominates the peer-to-peer landscape.

But the success of BitTorrent's design has also presented some technical difficulties. The recent increase in the volume of peer-to-peer traffic is directly attributable to the popularity of the BitTorrent protocol (Çiflikli, Gezer, Özşahin, & Özkasap, 2010, October). And BitTorrent's attempts to efficiently use the Internet's dormant upload capacity have translated into headaches for many commercial broadband service providers. Because BitTorrent takes up huge amounts of bandwidth in the upstream direction, many ISPs would like to slow down the flow of traffic across the Internet (Kelly, 2006, April 13). For example, as few as 10 BitTorrent users may account for up to 55% of the upstream capacity per neighborhood node (Ellis, 2006, May 7). An intervention into these systems is known as *traffic-shaping* or *throttling*. A number of ISPs have begun quietly limiting the available bandwidth for BitTorrent users. For example, Comcast angered many BitTorrent users when it began preventing peers from seeding by interjecting peer reset messages into BitTorrent swarms (Ernesto, 2007, August 17). As McCullagh (2007, October 19) explains, Comcast surreptitiously interfered with file transfers by posing as a peer and then terminating the connection. Comcast initially denied the activity but was later exposed (Svensson, 2007, October 19). BitTorrent's bandwidth consumption brings the interests of copyright holders and ISPs into alignment. As ISPs began to consider the legitimate and illegitimate uses of their communications infrastructure in the context of swarming downloads, their calls for concern about consumer privacy suddenly fell silent. With BitTorrent as a common

adversary, the copyright holders and ISPs were quickly able to work out a compromise in the shape of the graduated response program.

RENEWED FILE-SHARING LITIGATION

Perhaps the most significant impact of the RIAA litigation campaign targeting individual file-sharers has been the emergence of mass lawsuits as a means of copyright enforcement. Though the RIAA intended their campaign primarily as a means of deterrence, the out-of-court settlement component of the campaign was seen by some as a potential alternative revenue stream. It was believed that, to some degree, settlement money could make up for losses in traditional revenue streams. However, the RIAA's proclivity to pursue any defendant who ignored a settlement offer was costly—especially in the case of the protracted legal battles with Joel Tenenbaum and Jammie Thomas-Rasset. Still, to the extent that the plaintiffs were able to keep filing mass suits against large groups of “John Does” without actually having to set foot in court before reaching a settlement, the RIAA litigation campaign demonstrated potential as an alternative business model in the minds of some opportunistic lawyers and businessmen.

Copyright trolls

With the exception of the ongoing cases stemming from the RIAA litigation campaign, there have not been significant numbers of cases filed against individuals for allegedly sharing music, video games, or major motion pictures since August 2008. Yet more BitTorrent users were sued in U.S. federal courts for alleged copyright infringement in 2010 than over the course of the entire RIAA campaign. Between January 8, 2010 and

January 21, 2011 a total of 99,924 individuals were sued (Ernesto, 2011, January 30; Moya, 2011, January 31). One commentator referred to 2010 as *the year of the settlement letter* (Anderson, 2010, October 7). The lawyers targeting these roughly 100,000 people do not represent the major recording companies or motion picture studios. Rather they are individuals who saw in the RIAA litigation campaign the potential for an alternative and lucrative revenue stream.

The avalanche of new lawsuits began in May of 2010 when a lawsuit was filed against thousands of BitTorrent users on behalf of the producers of the independent film *The Hurt Locker* by an organization known as the US Copyright Group (USCG) (Sandoval, 2010, May 12). The USCG is the business arm of the law firm Dunlap, Grubb & Weaver. Lawyers from the group were inspired by a *profit-from-piracy* model of litigation pursued in the United Kingdom by the legal organization known as ACS:Law (Ernesto, 2010, November 2). USCG was doubtless also motivated by litigation occurring in Germany where copyright holders have targeted as many as 575,000 individuals. Roettgers (January 2011, 14) states, “The goal of this type of persecution isn’t so much to stop piracy, but to profit from it—and new statistics from Germany show that the strategy could be working, with P2P litigation becoming a multimillion dollar business” (§ 1). The same article observes that these German copyright holders have, for the most part, managed to stay out of the courtroom with only 150 lawsuits becoming full-blown court cases. Lawyers from USCG were also impressed with a proprietary technology used by their German counterparts to monitor movie downloads in torrents and to capture the IP

addresses of BitTorrent users thought to be infringing copyright (Newton, 2010, March 31).

The initial suit filed by USCG in the U.S. District Court for the District of Columbia was brought on behalf of Voltage Pictures, the makers of *The Hurt Locker*, and targeted 5,000 unidentified individuals (Gardner, 2010, May 28). USCG also filed a separate case on behalf of the makers of the film *Far Cry* targeting another 4,577 unidentified individuals (Anderson, 2011, March 4). In a matter of weeks USCG sued more than 20,000 individuals in Washington D.C. on behalf of an ad hoc coalition of independent film studios (Newton, 2010, May 27). These suits did not involve the MPAA, nor did any major motion picture producers immediately take part. It was not until February of 2011 that a major film release would join the ranks of independent films when USCG sued 6,500 unidentified BitTorrent users on behalf of the producers of *The Expendables* (Ernesto, 2011, February 8).

The legal lynchpin of this latest round of mass suits is *permissive joinder*, or the ability to join large numbers of “John Doe” defendants into a single lawsuit.⁷⁸ By filing one lawsuit, USCG incurs only one filing fee no matter how many individuals are included in the suit. The lawyers base the joinder on a particular technological characteristic of BitTorrent. Recall that previous incarnations of peer-to-peer file-sharing systems allowed two peers to share a file directly between them. Conversely, BitTorrent relies on swarm downloading in which a peer connects to a group of peers to download and upload individual segments of a particular file. USCG thus reasons that all

⁷⁸ *Permissive joinder* is defined as “the optional joinder of parties if (1) their claims or the claims asserted against them are asserted jointly, severally, or in respect of the same transaction or occurrences, and (2) any legal or factual question common to all of them will arise (Garner, 2006).

individuals participating in a torrent are collaborating together to violate copyright for a given file. USCG stated “Essentially, because of the nature of the swarm downloads...every infringer is simultaneously stealing copyrighted material through collaboration from many other infringers, through a number of ISPs, in numerous jurisdictions around the country” (Anderson, 2010, June 22). And just as with the RIAA litigation campaign, USCG threatens defendants with the prospect of a verdict with a statutory maximum \$150,000 per infringement in the hopes of reaching a quick out-of-court settlement for \$1,500 to \$2,500 per person. Unsurprisingly, this approach spawned immediate resistance.

In multiple court filings, the American Civil Liberties Union (ACLU), the Electronic Frontier Foundation (EFF), and Public Citizen challenged the USCG mass litigation campaign. These organizations argued against joinder in these cases and urged the courts to sever the defendants. In general, they argued that (1) the court lacked jurisdiction as all the cases were filed in Washington DC despite the fact that the defendants came from all over the country; (2) the plaintiff’s joinder is misapplied because the defendants have no real connection with each other and are not part of a conspiracy group; and (3) a lack of specific evidence other than a collection of IP addresses (Anderson, 2010a, June 3). In a sense, these public advocacy groups were also basing their arguments on a characteristic of BitTorrent file-sharing—the absence of traditional social ties in swarm downloading—but in this case it was used to the advantage of defendants rather than their detriment. The amicus brief filed by the ACLU and EFF in the *Far Cry* case stated “The individual Defendants still have no knowledge

of each other, nor do they control how the protocol works, and Plaintiff has made no allegation that any copy of the movie they downloaded came jointly from any of the Doe defendants” (§ 13).

There are a number of similarities between resistance to this latest litigation campaign and the history of resistance to the RIAA litigation campaign. In a move strikingly reminiscent of Verizon’s struggle during the RIAA campaign, Time Warner Cable is fighting USCG in court, arguing that the potential burden of complying with over 20,000 requests for information on behalf of independent movie producers would threaten the ISP’s ability to comply with more serious law enforcement requests. USCG responded to the cable giant by threatening to sue Time Warner for allegedly facilitating copyright infringement by refusing to cooperate with the plaintiff’s request for information (Newton, 2010, May 27). The USCG mass lawsuits also have galvanized outrage among many who see the litigation as little more than an attempt at extortion. One individual targeted in an USCG lawsuit referred to the legal action as “an outrageous scam” and characterized the USCG as ”organized crime” (Anderson, 2010, December 7, ¶ 2). A number of defendants have fought to keep their identities secret after being notified by their ISPs that they were being targeted by USCG. Some defendants sent handwritten motions to quash to the district court in DC (Anderson, 2010b, June 3). And in a move straight out of the Team Tenenbaum playbook, University of San Francisco law professor Robert Talbot has assembled a team of law students to defend 23 alleged downloaders pro bono. Professor Talbot stated “I feel like that this is a good cause. I’m always looking for ways to motivate students. They are incensed about what is going on”

(Ernesto, 2010, November 2, ¶ 8). But USCG has been undeterred by the mounting legal challenges to their efforts, even going so far as to sue defense attorney Graham Syfert for providing individuals caught up in the *The Hurt Locker* suit with legal self-help documents (for \$19.95) which included motion to quash and motion to dismiss forms. USCG wants \$5,000 for the work Syfert's self-help documents cost them (Ernesto, 2010, November 24).

XXX litigation

Another industry struggling to adapt to recent changes in technology is the pornography industry. These companies too have pursued the profit-from-piracy model of litigation. The first of the porn mass lawsuits came in September of 2010 when none other than Larry Flynt targeted 635 unidentified defendants for alleged copyright infringement (Cheng, 2010, September 27). Larry Flynt Publications (LFP) would go on to target several thousand anonymous BitTorrent users for allegedly sharing the adult film *This Ain't Avatar XXX* (Enigmax, 2011, February 16). The suits were filed on behalf of LFP by Dallas-based attorney Evan Stone. In a somewhat predictable turn-of-events, Time Warner Cable refused to comply with Stone's request for information, limiting discovery to ten requests per month (Newton, 2010, December 29).⁷⁹ Stone works with a Texas peer-to-peer monitoring organization known as the Copyright Defense Agency and is responsible for almost all of the peer-to-peer litigation in Texas, having filed as many as 16 mass lawsuits in the state on behalf of producers of pornographic films like *Der*

⁷⁹ Time Warner limited discovery in the previously discussed USCG case to 28 requests per month (Newton, December 29, 2010).

Gute Onkel (Anderson, 2011, February 16, 2010, October 7). Stone also has represented non-pornographic clients like anime distributor FUNimation on whose behalf he filed a case against 1337 individuals (his humorous reference to 1337 has yet to win him the sympathy of file-sharers).⁸⁰

Another attorney filing mass porn file-sharing lawsuits is Kenneth Ford who heads up a legal group known as the Adult Copyright Group, the self-proclaimed “market leader in fighting piracy of adult content” (Moya, 2010, December 21, ¶ 2). Between September and November of 2010, the Adult Copyright Group filed nine mass lawsuits in West Virginia targeting more than 22,000 unidentified BitTorrent users for allegedly sharing films like *Juicy White Anal Booty 4*, *Teen Anal Nightmare 2*, and *Relax, He’s My Stepdad 1* (Anderson, 2010, December 17, 2010, October 7). There is also Media Copyright Group, an organization headed up by a Chicago attorney formerly specializing in family law. In September of 2010 Media Copyright Group targeted 1,200 unidentified individuals for sharing family-friendly films like *Meat My Ass* (Anderson, 2010, October 7). Even the company which exploited the Paris Hilton sex tape is getting in on the profit-from-piracy litigation. Without a hint of irony, the company filed suits in the District Court of Central California against 843 unidentified defendants for sharing *I Night in Paris*, a film they did nothing to produce and acquired under disputed circumstances (Ernesto, 2011, January 25). These are just some examples of the pornography studios that have attempted to make file-sharing litigation pay.

The titles of these pornographic films are listed here not to demean the character of the plaintiffs in these cases but to illustrate how the content of the copyrighted

⁸⁰ 1337 is hacker speak for “leet” or “elite”. *Leetspeak* is an alternative alphabet for the English language.

materials in question can work to the advantage of the plaintiffs. For example, the 1,254 people targeted by Justin Slayer International, Inc. for allegedly sharing the pornographic film *Sara Jay in Heat* are probably more inclined to settle the case quietly rather than endure the public spectacle of an actual court case (Ernesto, 2011, January 18). This reality is not lost on pornographers. Consider the comments of Allison Vivas (Cheng, 2010, September 27), president of the adult company Pink Visual, who commented on the incentive provided by the risk of public humiliation:

It seems like it will be quite embarrassing for whichever user ends up in a lawsuit about using a popular shemale title. When it comes to private sexual fantasies and fetishes, going public is probably not worth the risk that these torrent and peer-to-peer users are taking. (¶ 6)

In some sense these cases resemble extortion. In January of 2011 gay porn producers Liberty Media, through their subsidiary Corbin Fisher, began touting a \$250,000 verdict they had extracted from a BitTorrent user. This was followed immediately by an announcement that they were offering a 14-day amnesty period during which BitTorrent users could email Corbin Fisher and arrange to make a \$1,000 payment to the company to avoid ending up as part of a “John Doe” lawsuit (Anderson, 2011, January 27; Enigmax, 2011, February 17, 2011, January 26). At least ten individuals gave Liberty Media the requested money despite no legal action of any kind having been initiated against them. Just the general threat of a mass lawsuit in which they might be caught up was enough.

Legal Setbacks

In December of 2010 these mass BitTorrent lawsuits were dealt a series of setbacks. First in the U.S. District Court for the District of Columbia Judge Rosemary Collyer told USCG to limit defendants to only those whom the court has jurisdiction over. For over a year USCG had attempted to join the cases of tens of thousands of BitTorrent users together for allegedly collaborating in the unauthorized distribution of the films *Far Cry*, *Steam Experiment*, *Uncross the Stars*, *Gray Man*, and *Call of the Wild 3D*. The judge rejected the plaintiffs' argument and ordered USCG to submit a revised list of defendants that included only those individuals within the court's jurisdiction. The plaintiffs complied and submitted a much shorter list while also promising to make good on their threat to target settlement holdouts by refiling individual cases (Moya, 2011, January 20).⁸¹ Then in the U.S. District Court for the Northern District of West Virginia Judge Preston Bailey dealt the Adult Copyright Company a severe blow by severing their mass BitTorrent lawsuit. In his ruling the judge argued that simply committing the same type of copyright infringement in the same manner is not a sufficient reason for joinder. Judge Bailey dismissed all of the subpoenas except for one and gave the Adult Copyright Company 30 days to refile individual complaints (Moya, 2010, December 21). Were the plaintiffs to refile each case individually they would incur a \$350 filing fee per complaint for a total of \$1.8 million (Anderson, 2010, December 17). And in January of 2011 the judge overseeing the Larry Flynt Publications BitTorrent mass lawsuits in the Northern District of Texas ruled the plaintiff's joinder was improper and dismissed the case,

⁸¹ In fact USCG did file individual suits in Minnesota against two previously targeted alleged BitTorrent users.

leaving attorney Evan Stone and the Copyright Defense Agency with the prospect of filing six thousand individual cases (Enigmax, 2011, February 16). Stone fared no better in another case targeting 670 unidentified individuals on behalf of pornographer Mick Haig Production. The case was dismissed in February of 2011 after EFF and Public Citizen got involved (Masnick, 2011, February 11; Newton, 2011, February 1). As with the RIAA litigation campaign, the judges in these cases have demonstrated little patience for plaintiffs. The annoyance of Judge Milton Shadur was palpable in his decision to throw out the mass lawsuit filed by Media Copyright Group (the family law turned pornography attorney) after an anonymous defendant submitted an amateur motion to quash.⁸² The judge used the motion to dismiss the case in its entirety and ordered the plaintiffs to notify everyone targeted with a subpoena of the case's dismissal (Anderson, 2011, February 26).

Other anti-peer-to-peer efforts

Thus far the MPAA has not initiated its own mass litigation campaign targeting individual BitTorrent users and has focused its efforts on other approaches instead. Fritz Attaway (2010, October 5), Executive Vice President and Special Policy Advisor for the MPAA stated:

We have used slightly different tactics than RIAA in part because of the nature of our respective works. There are certainly other reasons as well but MPAA has filed end user lawsuits like RIAA has. However, they are very expensive and we

⁸² Judge Shadur issued a memo stating: "It is an understatement to characterize [this case] as problematic in nature" (Anderson, February 26, 2011, ¶ 3).

have determined that there are other routes that provide a better return; among them education, working with intermediaries like ISPs to discourage infringing activity, and one, that is probably the most important, is encouraging the development of new business models that provide legitimate alternatives. All of these avenues we are pursuing very aggressively. Because for a number of reasons RIAA has focused on end-user suits and that makes sense for them. It is absolutely necessary we would agree that there be consequences to infringing behavior. If bad behavior does not result in consequences pretty soon no one thinks it's wrong. And that is not a good thing. So we agree that it is helpful to establish that there are consequences for infringing behavior but there are also a number of other things that can be done to discourage bad behavior and we are pursuing those as well. (§ 11)

One of the alternate approaches taken by the MPAA has been to target the weak links in the BitTorrent system—the aforementioned index and tracker sites. Beginning in 2006 the MPAA began taking legal action against sites like TorrentBox, ed2k-it, and TorrentSpy, claiming that these sites facilitated copyright infringement. Also in 2006, the MPAA targeted one of the most popular BitTorrent index sites, isoHunt. After a lengthy legal battle isoHunt was issued a permanent injunction by the U.S. District Court of California ordering it to begin censoring its search engine based on a list of thousands of keywords provided by the MPAA, or to discontinue its operations in the United States (Ernesto, 2010, December 21). isoHunt implemented the filter but appealed the case to the Ninth Circuit Court of Appeals arguing that the injunction amounted to an improper

abridgement of its right to free speech. isoHunt maintains that they provide a neutral service somewhat analogous to Google's search engine. But Google filed an amicus brief with the Court agreeing with the district court's decision that isoHunt encouraged its users to commit copyright infringement. Google's concern was that the court had unnecessarily reached the issue of *inducement*. Google contended that isoHunt clearly did not meet the standards for DMCA safe harbor protections. Therefore, Google felt that the court had unnecessarily conflated DMCA safe harbor protections with the issue of inducement to commit copyright infringement (Ernesto, 2011, February 20). Rather than finding common ground with isoHunt or other peer-to-peer systems, Google has gone out of its way to appease the copyright industries, even going so far as to censor its own search engine by banning terms like *BitTorrent*, *uTorrent*, and *Rapidshare* from its Autocomplete results (Moya, 2011b, January 26). It's likely that Google has been motivated to take sides in the peer-to-peer conflict by its own attempts to secure licenses for music, film, and television programming from the entertainment industry (Sandoval, 2010, December 2). The isoHunt case is another peer-to-peer file-sharing case in which the conflict over legitimate and illegitimate uses of communications systems becomes transparent. Rather than follow any principle of free access to information, Google sided against peer-to-peer file-sharing for fear of being adversely affected should the courts fail to make the distinction.

In August of 2010, the MPAA renewed the focus on university and college campuses. Recall that after lobbying by the RIAA and MPAA in 2008 Congress inserted language into the reauthorization of the Higher Education Act requiring universities to

provide students with access to authorized music downloading services and to invest in network filtering systems to inhibit the spread of file-sharing on their campuses. Many in the academic community opposed the bill because they feared that penalties would be added at some point in the future for those higher education institutions which did not meet compliance standards. These fears were well-founded. When the Department of Education drafted its 2009 rules implementing the bill, schools were required to use technological deterrents to discourage file-sharing on their campuses. If a university takes federal money, failure to comply with this mandate could jeopardize funding (Anderson, 2010, August 10). In December of 2010, the MPAA sent out letters to university administrators across the United States, reminding them of their obligation to protect the interests of the major motion picture studios. And in a move reminiscent of the RIAA's targeting of college students, the MPAA also announced that it will begin warning students believed to be engaging in illegal file-sharing that there will be consequences (Ernesto, 2010, December 5).

With the exception of the early criticism by a few members of Congress at the outset of the RIAA litigation campaign, the U.S. government has been a consistent resource and ally for the copyright industries. The approach to intellectual property adopted by the Obama Administration is marked less by change than it is by continuity. The U.S. intellectual property enforcement coordinator released a report in June of 2010 entitled the *Joint Strategic Plan on Intellectual Property Enforcement*. The report opens with a quote by President Obama: “[W]e’re going to aggressively protect our intellectual property. Our greatest asset is the innovation and the ingenuity and creativity of the

American people. It is essential to our prosperity and it will only become more so in this century” (p. 3). Coinciding with the report’s publication, Vice President Biden weighed in on file-sharing stating “We used to have a problem in this town saying this. But piracy is theft. Clean and simple. It’s smash and grab. It ain’t no different than smashing a window at Tiffany’s and grabbing [merchandise]” (Sandoval, 2010, June 22, ¶ 1). Members of Congress have also moved to give the Department of Justice increased powers to shut down websites which facilitate file-sharing. In September of 2010 Democratic Senator Patrick Leahy of Vermont and Republican Senator Orin Hatch of Utah proposed the Combating Online Infringement and Counterfeits Act which would allow the Department of Justice to file civil action against alleged pirate domain names and have U.S.-based domain names shut down if the courts determine them to be pirate sites (Sandoval, 2010, September 20). Though this particular bill died in committee, the Department of Justice nevertheless coordinated with the Department of Homeland Security’s Immigration and Customs Enforcement (ICE) to target a variety of online retailers of counterfeit and pirated goods in June of 2010. The initial coordinated effort, the so-called Operation in Our Sites, began with the seizure of nine domain names of websites offering pirated copies of first-run movies. In November of 2010 another 82 sites were seized, followed by an additional 10 in February of 2011 (Moya, 2011b, February 15). In conjunction with the February site seizures the Senate Judiciary Committee convened a hearing entitled Targeting Websites Dedicated to Stealing American Intellectual Property in which a number of Senators expressed their support for the aforementioned Combating Online Infringement and Counterfeits Act. The site

seizures conducted by ICE raise a number of problems. Critics of the program claim that the February site seizures caused the inadvertent shut down of nearly 84,000 websites (Moya, 2011, February 17). The program also intrudes on the sovereignty of other nations in the name of protecting U.S. markets. For example, in the February 2011 wave ICE seized Rojadirecta.org, a site which had been ruled legal in Spain. As Moya (2011b, February 15) observed, "...seizing foreign-based sites with no ties to the US opens up a Pandora's Box of possibilities in which other countries could reasonably argue for the seizure of US-based sites in violation of their laws" (§ 10).

Despite the problematic sovereignty issue raised by the U.S. government's Operation in Our Sites, there have been considerable international efforts to stem the practice of file-sharing. In the UK there was the previously mentioned ACS: Law which trumpeted its revolutionary business model in December of 2009 in which it would profit-from-piracy by suing thousand of alleged file-sharers and pushing pre-trial settlement offers (Moya, 2011a, February 15).⁸³ In January of 2011 the MPAA partnered with the Dutch anti-peer-to-peer organization BREIN to shut down 12 U.S.-based BitTorrent sites. BREIN itself was responsible for the shuttering of more than 600 sites and servers in 2010 (Moya, 2011, January 28). Also in January of 2011 Chinese authorities declared that anybody caught illegally distributing copyrighted materials over peer-to-peer networks with over 50,000 hits will face prison sentences of 3 to 7 years (Moya, 2011, January 25). The international music trade group, the International Federation of the Phonographic Industry (IFPI), issued an annual report in January 2011

⁸³ ACS: Law would eventually give up the campaign after the attorney heading up the effort complained of email hacking, bomb threats, and death threats (Moya, 2011, January 26).

in which the organization encouraged increased involvement by national governments to stem the tide of peer-to-peer file-sharing. The IFPI promoted the adoption of the graduated response system in which alleged file-sharers would receive warnings through their ISP with incremental penalties for continued acts of unauthorized distribution of copyrighted materials (Anderson, 2011, January 21). And in March of 2011, the IFPI announced a new copyright enforcement initiative in which the organization will work with credit card companies MasterCard and Visa to identify infringing websites and to deny these sites credit card transaction services (Lasar, 2011, March 4).

Although the RIAA litigation campaign was officially terminated in 2008, its repercussions are still felt today. A number of RIAA cases are still winding their way through the U.S. courts—the eventual outcome of which is yet to be determined. Perhaps more importantly though, the RIAA litigation model has been adapted by a new crop of opportunist lawyers and businessmen guided as much by the desire to profit from copyright infringement as by the desire to deter it. However, the BitTorrent protocol presents the copyright industries with a different set of challenges from the FastTrack or Gnutella protocols. Consequently, contemporary legal efforts to combat file-sharing have been structured somewhat differently than previous efforts. Attorneys have targeted individual file-sharers differently, attempting to link the coordinated activity of swarm downloading with a conspiracy to commit mass copyright infringement. The MPAA and their allies in government have targeted BitTorrent differently, focusing their efforts primarily on the structural weak link of index and tracker sites. Yet, just as the RIAA was met with legal resistance, these most recent efforts are being resisted by ISPs, individual

defendants, advocacy groups, university professors and their law students, peer-to-peer developers, and judges who all function to place constraints on the overall effectiveness of such campaigns. However, not all forms of resistance find expression in the courts. The conflict over peer-to-peer file-sharing is also conditioned by the extralegal activities of file-sharers who act as another constraint on the effective imposition of intellectual property law. Because as much as these court battles may have turned on issues of legitimate and illegitimate uses of the courts and communication systems, nowhere in the legal arena was the monopoly control of copyright holders over informational and cultural goods seriously challenged. Yet that monopoly control is, in fact, in serious jeopardy. Any attempt to understand the conflict over peer-to-peer file-sharing must also be informed by a consideration of the file-sharing community and its extra-legal practices.

Chapter 7 A Survey of File-Sharers

The trajectory of capitalist development in the production and distribution over the Internet of music and other related commodities is determined by the establishment of a form of social relations amenable to capitalist accumulation. With respect to the commoning taking place as part of peer-to-peer file-sharing, the copyright industries must find a way to bring these alternative social relations within the capitalist logic or eliminate them. The conflict over the potentialities of those social relations occurs in three interrelated areas: the technological, the legal, and the social. Thus far we have examined the first two arenas in some depth. Generally speaking, we have seen how the music industry has opted to attempt to eliminate the social system of commoning rather than try and assimilate it. In Chapter 4 I discussed the general displacement of early peer-to-peer systems by client-server systems out of an economic imperative for centralized modes of production. In Chapters 5 and 6 I detailed how the RIAA and other media firms attempted to mobilize legal resources in an ongoing effort to deter or eliminate the practice of decentralized file-sharing. Though these legal actions may have originated with an eye to deterrence, opportunistic lawyers and businessmen have since tried to make the litigation itself profitable. But we have not given full consideration to the social dimension of file-sharing. We cannot attempt to fully understand the dynamics of this conflict without giving explicit consideration to this third arena because it is every bit as significant as economic imperatives or legal pressures in determining the direction of capitalist development in this particular field.

Our current understanding of the social dimensions of file-sharing is inadequate. Discourse about the social function of peer-to-peer systems generally falls into two categories: *criminality* or *missing markets*. The criminality framing of file-sharing is a poorly adapted construct in which a comparison is drawn between the theft of rival goods and the theft of nonrival goods. Consider again the aforementioned quote from United States Vice President Biden: "...piracy is theft. Clean and simple. It's smash and grab. It ain't no different than smashing a window at Tiffany's and grabbing [merchandise]" (Sandoval, 2010). Even the most cursory examination of file-sharing indicates that it is not *clean and simple*. The nonrival character of the cultural artifacts being shared in peer-to-peer networks alone reveals the speciousness of the Vice President's metaphor. Additionally, the range of phenomena encompassed under the header *piracy* as a type of criminality calls into question the suitability of that term as well. For example, the European Union has defined piracy as whatever the knowledge industry needs protection from (Johns, 2009). Moreover, the *sharing* in file-sharing renders the piracy metaphor hollow. The superficiality of the term with respect to file-sharing stems from the application of an anti-social framing to a richly social activity.

Some academic discourses on file-sharing have adopted a missing markets framing in which file-sharing results from an unexpected turn in consumer demand. This was essentially Clay Shirky's (2001) position as he dismissed the civil disobedience of Napster users by arguing that file-sharing did not constitute a rejection of the pricing system per se but instead indicated a demand for lower prices. It is also the position of Cenite et al. (2009) who argued that peer-to-peer file-sharing results from a market

imperfection which could be remedied if the copyright industries would just adopt more convenient and efficient business models. Neither of these positions is wholly without merit. The problem with these analyses lies not in what they say but what they don't say. By naturalizing the market form, these approaches can only explain file-sharing as some sort of aberration. The structural dimension of peer-to-peer systems is largely ignored. The possibility of social relations premised on something radically different than market relations is foreclosed. Confronting file-sharing as a market imperfection obscures both the antagonisms produced by commodification and the development of alternative social relations.

SOCIAL SYSTEM OF FILE-SHARING

This study confronts file-sharing as a constitution of alternative social relations premised on a commoning of resources. These social relations are not framed as somehow outside of the capitalist system. In fact, they are deeply ingrained within its contemporary logic. Yet, they are also in contradiction with that logic. The way in which the music industry ultimately attempts to come to terms with that contradiction will be determined largely by the stubborn persistence of these social relations. In the pages that follow I present the results from a survey of 363 file-sharers as part of an exploration of the structural dimensions of file-sharing. I begin with a brief discussion of the theoretical framework and methodology adopted in this study. After an overview of the sample of file-sharers I continue to a discussion of the results of the study. At the conclusion I make the case that the conflict over peer-to-peer file-sharing is best understood as the product of a conflict between two contradictory social systems, one based on commodification

and the other based on commoning, and that the dynamics of this conflict have explanatory power for understanding the trajectory of capitalist development in the sphere of information production and distribution.

The purpose of this study is to begin to map the intersections of the social structures implicated in file-sharing. This study differs from previous work on file-sharing in that it starts from the perspectives of file-sharers and seeks to understand how the class antagonism influences the eventual trajectory of capitalist development in this particular area. In keeping with Hardt and Negri's work on the commons, I approach file-sharing as a demonstration of the paradoxical tendency of capital⁸⁴ to produce commons despite a continuing drive to privatize resources. As Hardt and Negri (2009) explain:

In the newly dominant forms of production that involve information, codes, knowledge, images, and affects, for example, producers increasingly require a high degree of freedom as well as open access to the common, especially in its social forms, such as communications networks, information banks, and cultural circuits. Innovation in Internet technologies, for example, depends directly on access to common code and information resources as well as the ability to connect and interact with others in unrestricted networks. (X)

But these commons are not exterior to the capitalist system. They are at its heart. And confronted with such an intimate paradox, capitalists are left with but two choices: attempt to destroy the commons or attempt to bring it within the logic of accumulation. Much of the previous litigation and law enforcement efforts against file-sharing represent

⁸⁴ Again, *capital* is used here to refer to a historically specific set of social relations in which the circulation of commodities is structured so that the owners of the means of production are able to accumulate wealth.

the former choice while calls to create a new business model respecting some new digital logic represent the latter.

Yet the fate of the commons is not determined by capitalists alone. If anything, the persistence of file-sharing in the face of such large-scale legal and police efforts betrays the impotence of capitalists to choose their own destiny. Indeed, as was mentioned previously, the volume of peer-to-peer traffic is predicted to double to more than 7 petabytes per month by 2014 despite the best efforts of copyright groups to stem the tide (McDaniel, 2010). Consequently, any attempt to understand the conflict over file-sharing must include an analysis of the structure of peer-to-peer systems. I employ Giddens's (1986) structuration theory to conceptualize the structures of peer-to-peer systems as the rules and resources recursively implicated in the reproduction of the file-sharing community. Hence, file-sharing is seen not as the simple product of technological developments or market imperatives, but as a social system relying on shared meanings and materials for the co-ordination and reproduction of file-sharing activities. And though this social system is contradictory to the logic of accumulation, it is embedded within capital and not exterior to it. It is simply a more developed way of conceptualizing an antagonistic class relation in which there is a struggle for the surplus of social wealth. And in keeping with Giddens, I consider individual file-sharers to be knowledgeable social actors capable of furthering our understanding of the conditions under which their activities occur.

Peer-to-peer file-sharers do not resemble conventional portrayals of working class identity. Traditional Marxist interpretations of class have centered on the mode of

capitalist production in general and waged workers in particular. But in the current media landscape there is no bright line distinction to be made among producers, consumers, and distributors of information commodities. This is not to say that the concept of class is irrelevant. Quite the contrary—the more egalitarian dissemination of the means of media production and distribution has been accompanied by greater levels of exploitation.⁸⁵ But as exploitation becomes generalized and non-localized⁸⁶, so must our understanding of the working class. This is the spirit in which Hardt and Negri (2004) conceived of the *multitude* as “all those who work under the rule of capital and thus potentially as the class of those who refuse the rule of capital” (p. 106). It is in this spirit that I assert that file-sharers are engaged in non-localized and general struggle against the rule of the copyright industries. Yet the vagueness of this declaration requires additional comment. Can one speak of class when discussing peer-to-peer file-sharers if they are not united by shared proximity, socio-economic status, nationality, gender, race, ethnicity, or culture? How else might one explain the numerous examples of collective action taken by peer-to-peer file-sharers—everything from raising funds for individuals caught up in file-sharing litigation to the Operation Payback denial of service attacks launched by the secretive collective known as Anonymous targeting the IFPI, RIAA, and MPAA? Only an investigation of the file-sharers themselves can begin to answer these questions.

⁸⁵ Here I am referring to Terranova’s (2004) concept of *free labor*—“Simultaneously voluntary given and unwaged, enjoyed and exploited, free labour on the Net includes the activity of building websites, modifying software packages, reading and participating in mailing lists and building virtual spaces” (p. 74).

⁸⁶ Here I am referring to the Autonomist Marxist notion of the *social factory* in which the production of surplus value transcends its traditional home in the factory and becomes generalized throughout society. As Lazzarato (1996) states, “Now, the post-Taylorist mode of production is defined precisely by putting subjectivity to work both in the activation of productive cooperation and in the production of the “cultural” contents of commodities” (p. 143).

The concept of the multitude speaks to the generalized class antagonism but leaves much to the imagination with respect to how file-sharers relate to each other. I have asserted previously that the social system of commoning precedes the exercise of power, the imposition of the commodity form. If this is true, then the social relations of file-sharing must be based on something more than just resistance. In other words, the social cohesion among file-sharers must be derived from something in addition to the class antagonism. I asked Professor Charles Nesson of Harvard Law and Team Tenenbaum whether he thought there was a community of file-sharers. Nesson (personal communication, 2010) responded:

It's a good question. I haven't had a tangible sense of it. That is, it doesn't present itself in any strong degree. And yet I have the feeling that it's there. That is, it's [a] sense of knowing that a generation of kids grew up with this stuff and they must be interested. And if they are interested then they must be puzzled.

Nesson's comment speaks to the disequilibrium experienced by those who have grown up immersed simultaneously in the logic of sharing and the logic of economic exchange. But who are these peer-to-peer natives and what shared meanings inform their mode of discourse? While the notion of *community* may appear to be as good a place as any to begin this investigation, there has been considerable debate over the meaning of community in the online context. According to Wilbur (1995), "Community seems to refer primarily to relations of commonality between persons and objects, and only rather imprecisely to the site of such community" (§ 10). This approach is useful to the extent that it allows for the inclusion of the non-localized spaces of the Internet. The current

investigation seeks to explore the non-localized structural dimensions of peer-to-peer systems and the ways in which they are structured to pattern social relations across time and space. Some critics of online community have asserted that these spaces produce relationships that are somehow more isolated or less-fulfilling than those of the physical world. For example, Willson (2001) argues that online communities foster individuation and compartmentalization as social interactions are conducted in physical isolation with others in different geographic locales. Individuals effectively detach themselves from their immediate surroundings while their representation of self is made superficial by the limits of online technology. Yet such critiques often idealize face-to-face communities and ignore the social isolation characteristic of modern society (Kollock & Smith, 1999). Moreover, as Rheingold (2000) has noted, online communities often move seamlessly from CMC to face-to-face interactions.⁸⁷ Without treading too far into the debate over the legitimacy of online community, I simply accept that given the limited opportunities for social presence in online interactions, these interactions are nevertheless capable of creating and maintaining a limited number of strong social ties, a high number of weak social ties, and a sufficient number of intermediate-strength ties for collective action (Wellman & Gulia, 1999). I proceed on the basis of identifying those common practices, objects, identities, and ideas which provide social cohesion among file-sharers.

Peer-to-peer systems are characterized by norms of reciprocity conditioned by social and technological structures. Some critics have argued that such norms are more typical of face-to-face social interactions and that online interactions merely remove the demand for reciprocity (Willson, 2001). Yet, there is substantial evidence of reciprocity

⁸⁷ Willson (2001) also acknowledges that online communities sometimes involve face-to-face interactions.

in online communities (Wellman & Gulia, 1999). The ability of online communities characterized only by weak to intermediate social ties to foster norms of reciprocity stems from a change in the economy of human interaction. As Kollock (1999) states, the “...fundamental features of online interaction...change the costs and benefits of social interaction in dramatic ways” (p. 221). First and foremost, the economy of online interaction negates the necessity of close social ties for collective action. Some research has shown that file-sharers are motivated by feelings of altruism and community spirit (Moya, 2010, December 9). Other researchers have pointed to motivations other than altruism—reciprocity, gaining prestige, a sense of efficacy within the group (Kollock, 1999). Whatever the motivation, the viability of a file-sharing community proceeds from the dramatically lowered transaction costs made possible by online interactions.

Rheingold (2000) characterized these types of online social interactions early on as a *gift economy*. File-sharing as a social practice can be contrasted with commodity exchange in a number of ways. First, the exchange of commodities does not produce any continuing social obligation between parties. As Kollock (1999) explains, “...gifts are exchanged between individuals who are part of an ongoing interdependent relationship. In a commodities transaction, the individuals are self-interested, independent actors” (p. 221). Second, the files being shared are nonrival goods. That is to say one person’s consumption does not impact another person’s consumption. Third, the files are public goods in that it is difficult to exclude people from benefitting from the goods. And finally, the costs of participating in the social system of commoning are extremely low relative to the social system of commodity exchange. It is difficult for consumers as a

class to gain any ground in the wage struggle unless they are willing to step outside their assigned roles as consumers. On the other hand, the coordination costs of collective action through online communities can be significantly lower. Commons are readily established for the free dissemination of cultural artifacts. Witness the constant adaptation of peer-to-peer platforms in the wake of various legal assaults. Protests and offensive actions are mobilized with great speed and substantial impact. Consider the distributed denial of service attacks (DDoS) launched by Anonymous during Operation Payback which resulted in the shutdown of both the RIAA and MPAA websites (Enigmax, 2010, September 19). And physical resources are adroitly assembled through online interaction, as was the case with the funds raised on behalf of Patricia Santangelo and Joel Tenenbaum.

METHODOLOGY

Proceeding from the assumption that there is indeed a community of file-sharers capable of collective action due to the change in the economy of human interaction, I attempt to answer a number of questions about the structural dimensions of peer-to-peer systems. The questions I asked file-sharers are as follows: (1) Why do you use peer-to-peer applications to acquire music, movies, or television programs?; (2) When do you own music? What should you be able to do with it when you own it?; (3) What are the reasons for having copyright law? What function does it serve? Are there any changes you would make to copyright law?; (4) How should musicians feel about peer-to-peer file-sharing?; (5) Do you think the major record labels or the RIAA are concerned about the welfare of either musicians or music fans?; (6) Do you consider people who share

copyrighted materials over peer-to-peer networks to be criminals?; (7) How do you learn the necessary skills to be a peer-to-peer file-sharer? What resources do file-sharers have at their disposal?; (8) Is there a community of peer-to-peer file-sharers?; and (9) What has been the effect of the RIAA lawsuits targeting individual file-sharers?

I utilized survey research to gather data from a population of peer-to-peer file-sharers. Recognizing that as a class of people file-sharers have been the consistent target of both public scorn and legal action, I took the time to gain the trust of several prominent members of the file-sharing community. These individuals are in charge of a range of file-sharing forums, IRC channels, and private BitTorrent sites. I spent close to a year working with these individuals, sharing the results of my work on file-sharing and soliciting their help with the design and implementation of my research. The current survey was designed as a series of open-ended questions for file-sharers as part of an exploratory phase of my research. Respondents were free to provide as much or as little information as they felt comfortable with and could answer all or just a portion of the questionnaire. I agreed to keep the collection of background and personal information to a minimum. The survey was announced within the peer-to-peer file-sharing community with the assistance of my contacts and was available online for three weeks before being closed. There were both advantages and disadvantages to the design. Open-ended questions are appropriate to exploratory research, especially when the researcher cannot anticipate the range of responses. The risk associated with open-ended questions is that researchers may not receive adequate responses as respondents are not willing to think deeply enough about questions and do not provide satisfactory answers. I was assured by

my contacts within the file-sharing community that this risk was minimal because the community was highly motivated to speak out on this topic. This advice proved prescient as I received an unexpectedly high number of quality responses to my questionnaire. I view this initial phase of research as something akin to a large-scale focus group discussion with file-sharers. I intend to use the data gathered here to create a more formal survey which I will administer as part of a separate research endeavor.

RESPONDENTS

In total, 363 people responded to the survey. Survey respondents were asked to provide basic information regarding their age, country of origin, work, and the amount of experience they have had with peer-to-peer file-sharing applications. Of the 363 survey respondents 356 individuals provided information about their age. This information is presented in Table 7.1. While respondents ranged considerably in age from 13 to 65 years almost half of them were in their twenties.

Table 7.1: Respondent Ages

Respondent Ages (n = 356)		
Age	Number	Percent
13-19	65	18.3
20-29	171	48
30-39	64	18
40-49	37	10.3
50-59	14	4

Table 7.1 (continued)

60-69	5	1.4
--------------	---	-----

This was a truly international sample with respondents coming from all over the globe. Of the total respondents, 346 individuals indicated their nationality. This information is presented in Table 7.2. Respondents from 42 countries participated in the survey though the majority came from the United States, United Kingdom, and Canada. The Western bias in the sample is likely due to the English format of the survey and its announcement in English-speaking file-sharing forums.

Table 7.2: Nationalities

Nationalities (n = 346)		
Country	Number	Percent
United States	137	39.6
United Kingdom	52	15.0
Canada	32	9.3
Australia	19	5.5
Finland	13	3.8
Netherlands	12	3.5
Germany	9	2.6
Sweden	7	2.0
Mexico	7	2.0

Table 7.2 (continued)

Denmark	5	1.5
Portugal	4	1.2
France	4	1.2
New Zealand	4	1.2
Czech Republic	3	0.9
Russia	2	0.6
Ukraine	2	0.6
Romania	2	0.6
Croatia	2	0.6
Estonia	2	0.6
Belgium	2	0.6
Brazil	2	0.6
Bangladesh	2	0.6
Malaysia	2	0.6
Thailand	2	0.6
Ireland	1	0.3
Iceland	1	0.3
Switzerland	1	0.3
Spain	1	0.3
Greece	1	0.3
Cyprus	1	0.3
Austria	1	0.3

Table 7.2 (continued)

Serbia	1	0.3
Poland	1	0.3
Bulgaria	1	0.3
Turkey	1	0.3
Israel	1	0.3
India	1	0.3
Chile	1	0.3
Argentina	1	0.3
Peru	1	0.3
Philippines	1	0.3
Senegal	1	0.3

I received 346 responses indicating employment type. Respondents came from all walks of life—programmers and web developers, doctors, a lawyer, a meditation teacher, an anthropologist, an unemployed forest worker, a preacher, college and high school students, a taxi driver, a disabled veteran, a butcher, delivery drivers, musicians, a tour guide, a retired airline operations officer. In order to make sense of all these diverse backgrounds I made some minor modifications to the Standard Occupational Classification System used by the United States Department of Labor to create Table 7.3. While the majority of respondents appear to either be students or working within high tech and media industries, substantial numbers of them came from other fields. A significant number of respondents (7.8%) were unemployed.

Table 7.3: Occupations

Occupations (n = 346)		
Occupation	Number	Percentage
Student	126	36.4
Computer & Network Administration, Software Developer	40	11.6
Unemployed	27	7.8
Arts, Design, Entertainment, & Media/Journalism	25	7.2
Sales	21	6.1
Architecture & Engineering	16	4.6
Self-employed	14	4.0
Business & Financial Operations	9	2.6
Installation, Maintenance, & Repair	8	2.3
Education, Training, & Library	7	2.0
Office & Administrative Support	7	2.0
Retired	7	2.0
Manufacturing	5	1.4

Table 7.3 (continued)

Food/Drink Preparation & Service	5	1.4
Healthcare Practitioners	5	1.4
Management	4	1.2
Personal Care & Service	4	1.2
Transportation	3	0.9
Life, Physical, & Social Sciences	2	0.6
Construction & Resource Extraction	2	0.6
Military	2	0.6
Protective Services	2	0.6
Legal	1	0.3
Healthcare Support	1	0.3
Building/Grounds Maintenance & Cleaning	1	0.3
Stay-at-home Parent	1	0.3
Real Estate	1	0.3

I received 362 responses indicating the level of experience with file-sharing applications. This information is presented in Table 7.4. Respondents had varying levels of experience but the majority seemed to be veteran file-sharers. Respondents with six or

more years of experience with file-sharing applications accounted for 67.9% of the sample.

Table 7.4: Experience File-Sharing

Experience with File-sharing (n = 362)		
Years	Number	Percentage
Less than 1 year	3	0.8
1 to 2 years	15	4.1
3 to 5 years	98	27.1
6 to 10 years	147	40.6
More than 10 years	99	27.3

Question 1: Why Do You Use Peer-To-Peer Applications To Acquire Music, Movies, or Television Programs?

When asked to explain why they use peer-to-peer applications to acquire content respondents cited numerous reasons. I sorted 357 responses into the 15 general categories presented in Table 7.5.

Table 7.5: Reasons for Using P2P

Reasons For Using P2P Applications (n = 357)		
Reason	Number	Percentage

Table 7.5 (continued)

Economic motivation	183	51.3
Higher relative quality	171	47.9
Unavailability in local markets	121	33.9
Previewing	71	19.9
Political motivation	60	16.8
Time shifting	45	12.6
Avoiding advertisements	41	11.5
Format shifting	34	9.5
Sharing	31	8.7
Out-of-print content	29	8.1
Discovery of new content	24	6.7
À la carte selection	13	3.6
Previously established behavior	6	1.7
Obtaining pre-release content	4	1.1
Obtaining public domain, open source, and Creative Commons content	3	0.8

A very large percentage (51.3%) of the responses included some mention of *economic factors* as a reason for using peer-to-peer applications to gain access to content. Responses in this category typically referenced things like poverty, unemployment, and the high cost of some content. This category of responses points to the structural relations of capitalism and the antagonism of class-divided societies in which private property in

the means of information production and distribution result in skewed distributions of the surplus of social wealth. In this sense file-sharing applications become a tool of re-appropriation. These economic factors also call into question industry claims regarding lost sales because without peer-to-peer systems many file-sharers simply may not have the financial means to acquire content.

Another sizeable portion of respondents (47.9%) stated that they were motivated to use peer-to-peer applications because of the *higher quality* offered by such systems. Respondents cited things like higher quality file formats, better selection, more reliable and faster content distribution, ease of use, and greater special features like language options. Respondents often talked of wanting to avoid theaters or trips to brick-and-mortar stores and of the greater efficiency offered by peer-to-peer systems. Sometimes peer-to-peer systems simply provided access to content where none existed before. One respondent cited his/her lack of a credit card. Some respondents indicated that cable systems were not available in their area. But all of the responses in this category emphasized the relative quality of peer-to-peer systems in some way whether in terms of format, selection, or distribution.

Many respondents (33.9%) pointed to the *unavailability* of specific content in local markets as a reason to use peer-to-peer systems. These responses included expatriates from Western nations and non-Westerners seeking access to content produced in extra-local markets. A somewhat related category was *obtaining pre-release content* in which respondents were motivated by a desire for access to content before the scheduled calendar release date. These respondents typically wanted access to albums or movies

before the first official release date. Only 1.1% of respondents cited this as a motivation. The inverse of the pre-release category was the *out-of-print* category in which 8.1% of respondents cited a desire to gain access to rare or older content no longer available. A lack of substantial demand undoubtedly accounted for the unavailability of some types of content. A substantial portion of respondents (19.9%) mentioned their desire to *preview* content before deciding whether or not to make a purchase. The mantra for this group of responses seemed to be *try before you buy*. Responses in this category included some expression of the intent to purchase.

Another substantial motivation for using peer-to-peer systems cited by 9.5% of respondents was *format-shifting*. In general, these responses included some expression of dissatisfaction with Digital Rights Management (DRM) systems. Respondents sometimes expressed a desire to change file formats for the purpose of creating and maintaining digital archives of content. At other times they expressed a desire to move content across various playback devices in order to enjoy content in a variety of settings. A closely related category to format-shifting is *time-shifting*. This included 12.6% of respondents who also expressed dissatisfaction with DRM but whose motivation to use peer-to-peer applications was based on temporal factors like immediate and repeated access to content. This is analogous to a desire for on-demand access to content. Another 11.5% of responses expressed a desire to *avoid advertisements* as an incentive to use peer-to-peer systems. Respondents in this category often complained of so-called forced content like unskippable movie trailers and antipiracy warnings. A final DRM-related category was the *à la carte selection* category in which 3.6% of respondents indicated a wish to have

more control over their purchases. Most often this worked out as a desire to purchase singles or episodes rather than complete albums or series.

All of the categories mentioned thus far could conceivably be explained by the market imperfection interpretation of file-sharing. However, there were a number of responses which transcend such a framing of file-sharing. A fairly significant portion of responses (16.8%) referenced *political motivations* for using peer-to-peer systems. Many of these respondents cited RIAA and MPAA litigation targeting file-sharers and peer-to-peer systems and a desire to boycott these groups while still enjoying their content. Respondents often argued that artists don't get their fair share in payment from the recording industry anyway so there was little incentive to make purchases through authorized services. A small portion of respondents (1.7%) stated that their use of peer-to-peer systems had been *conditioned by previous experience* with previous peer-to-peer systems. That is to say they used peer-to-peer systems simply because it was what they were used to. An explicit *desire to share* content was also cited by 8.7% of respondents as a motivation. The mantra for this group was the familiar *sharing is caring*. Respondents spoke of their enjoyment of the community of file-sharers, their delight in teaching and helping others in various peer-to-peer forums, the inherent naturalness of sharing among humans, and the pleasure derived from sharing cultural artifacts with friends, families, and strangers. Still other respondents (6.7%) cited the *discovery of new content* as a motivation. These respondents often linked this discovery process back to the social aspects sharing which they argued was a more effective means of distribution for content than marketing or advertising. And finally, a small number of respondents (0.8%)

cited a desire to utilize peer-to-peer systems to share *public domain, open source, and Creative Commons content*. This second group of motivations begins to reveal a social dimension to file-sharing which is simply lost or obscured by analyses which frame the phenomenon either as criminal behavior or as a missing market. In sum, all of these categories point to the structural dimension of domination because they all hinge on access to some degree. They reveal the fundamental antagonism produced by the class divisions of capitalist society. Those who are excluded from control over resources by the institutions of private property seek out alternative means with which to access those resources. In this sense peer-to-peer file-sharing produces a more efficient distribution of resources among those people who have been commonly impeded in one way or another in their access to informational and cultural goods.

Question 2: When Do You Own Music? What Should You Be Able To Do With It When You Own It?

This particular question is actually comprised of two separate but related questions. Both questions required respondents to consider what constitutes a property right in music. The emphasis of the first question is on the establishment of a right(s). By asking them when they own music, respondents were to consider the conditions which must be met in order to gain access to a music commodity. Oftentimes this involves giving up one thing in order to gain something else. The emphasis of the second question was on the exercise of a right(s). Respondents were to consider what types of activities or uses should be encompassed by the property right which they have acquired. These questions were asked together in order to give respondents the opportunity to explore the

relationship between the conditions and the exercise of property rights in music.

Unsurprisingly, this approach resulted in disparate and complex responses making systematic analysis somewhat difficult. Some respondents chose to answer one question and not the other. I received 327 responses to Question 2 and organized the responses into Tables 7.6 and 7.7. Table 7.6 concerns the establishment of property rights in music while Table 7.7 focuses on the enumeration of desired rights.

Table 7.6: When Do You Own Music?

When Do You Own Music? (n = 327)		
Circumstance	Number	Percentage
Contingent on payment	143	43.7
Contingent on noncommercial use	58	17.7
Contingent on possession	41	12.5
Contingent on creative authorship	18	5.5
Contingent on attribution	17	5.2
Contingent on no mass sharing	9	2.8
Ownership of music is not possible	58	17.7

A very large percentage of respondents (43.7%) indicated that they felt like property rights in music were *contingent upon payment* being made. Many of these respondents were careful to note that the exchange of money only resulted in the acquisition of a copy of the song and not a right to the song itself. A smaller portion of responses (12.5%) indicated that ownership was *contingent on possession* regardless of

how it was acquired. This could include music acquired either through sharing or payment. Music streaming services were singled out by respondents as precluding the establishment of any feasible property rights in music. Many responses (17.7%) simply *ruled out the possibility of the establishment of property rights in music* on existential grounds. These responses typically asserted that no one can own music (or conversely, music is owned by everyone). A significant portion of respondents (17.7%) indicated that their property right(s) in music were *contingent upon noncommercial use*. That is to say there was a concern among these respondents that ownership of a copy of a song should not include the right to profit from that copy in any way. A preoccupation with noncommercial use was a recurring theme. In part, this was because noncommercial use is a way for file-sharers to frame their own activities when defending the practice. Another portion of responses (5.2%) asserted that a property right in music was *contingent upon always giving the artist attribution*. Some of these responses indicated that it was a transgression of sorts to attempt to pass off an artist's work as your own. A small percentage of responses (2.752%) indicated that the establishment of a property right *did not include the right to indiscriminately share* a song(s) with others. Responses in this category spoke of the necessity of preserving the distribution rights of artists for economic incentive. Interestingly, 5.5% of responses asserted that *no property rights in music existed apart from the artist or composer*. These responses did not make explicit mention of the idea-expression found in intellectual property law but instead emphasized the act of creative authorship as the keystone of property in music. These responses generally fall within the structural dimension of legitimation as they help to establish the

social norms and values among file-sharers which inform their particular conceptualizations of property in music. Overall these responses indicate a healthy respect among file-sharers for the moral rights of authors of creative works. Moreover, a very high number of respondents (43.7%) indicated that payment was a stipulation of ownership, again lending credence to the notion that file-sharers are not explicitly rejecting commodity exchange. Though it is also significant that a sizeable portion of respondents (17.7%) rejected the notion of property in music altogether.

Table 7.7: What Does Ownership of Music Entail?

What Does Ownership of Music Entail? (n = 327)		
Rights	Number	Percentage
Format-Shifting	106	32.4
Sharing with close social ties	45	13.8
Unlimited rights	44	13.5
Sharing with no qualification	42	12.8
Remix/edit	41	12.5
On-demand playback	26	8.0
Public performance	13	4.0
Resell original copy	9	2.8
Access in perpetuity	4	1.2
Sell remixes	3	0.9
Commercial use	1	0.3

In answering the second question, respondents petitioned for a number of rights to be encapsulated by ownership. Interestingly, only 12.8% of responses indicated a demand for *unlimited rights* as part of music ownership. However, this category included a substantial number of the *do whatever I want with it* variety of responses, which in all likelihood does not constitute a call for truly unlimited rights, but rather is probably indicative of a careless response. A substantial portion of responses (32.4%) indicated that ownership should entail the ability to *format-shift*. These respondents expressed a desire to move songs across devices for mobility and back-up storage. Similarly, 8.0% of responses indicated that ownership should entail *on-demand playback*. These respondents wanted the ability to play songs as many times as they desired and whenever they desired. Both of these categories indicate that many file-sharers view DRM as antithetical to ownership. Perspectives on sharing and ownership varied. The percentage of responses indicating that *sharing was okay as long as it was done with friends, family, and associates* (13.8%) slightly outnumbered the responses which advocated for *indiscriminate sharing* as a part of ownership (12.8%). This may be related in some way to the growing popularity of private tracker sites. A related category of responses (4.0%) included those that indicated the *public use of music at parties, clubs, or businesses* should come with ownership. A fair number of responses (12.5%) mentioned *remixes, mash-ups, and other edits* as a component of property rights. Typically, these also registered a desire to use YouTube or other form of Internet delivery to post the transformed content. A very small percentage of responses (0.9%) specified that owners should also be able to sell these *derivative works*. And finally, a very small portion of

respondents (1.2%) indicated that property should entail a *permanent right of access* to the content. In other words, these respondents felt like they should only have to pay once for content even if formats should change or their owned copy become corrupt.

Interestingly, only one respondent out of 327 expressed a desire to make *commercial use* of the original copy of the music by reselling copies. These responses speak more to the structural dimension of domination than they do to legitimation because they reflect the terms by which file-sharers want control over resources. Generally speaking, these responses indicate that file-sharers want a more active-engagement with cultural artifacts—many want to play them wherever and whenever they want; some want to edit and rearrange songs; and substantial numbers want the freedom to share these songs with others in a noncommercial way. It is certainly indicative of resistance to an industry which is determined to extract rents from every conceivable usage.

Question 3: What Are The Reasons For Having Copyright Law? What Function Does It Serve? Are There Any Changes You Would Make To Copyright Law?

Question 3 is actually a bundle of questions designed to elicit a discourse on the subject of copyright. Here I am concerned with exploring the structural dimensions of legitimation and signification. These shared beliefs and values condition how the peer-to-peer file-sharing community confronts copyright law. These unifying themes take on real significance when one considers both the extent of the practice of file-sharing in the general population and the recursive relationship between law and social/cultural practices. In this light respondents were asked to consider both the current role of copyright law in society and the types of reforms they would like to see reflected in the

law. Because respondents come from many nations with diverse copyright traditions and because of the complexity of the responses I received, I did not attempt to organize the responses based on percentages. Instead, I identified a number of themes and provided examples of responses which typify each. I begin first with those responses commenting on the role of copyright law before moving on to those responses pertaining to reforms.

Generally speaking, respondents demonstrated a heightened awareness of the political economy of copyright law. Their understanding of how copyright law functioned across different national contexts was fairly sophisticated. Most respondents expressed some dissatisfaction with the current state of copyright laws. Only a handful of respondents did not. One such respondent was an 18 year old U.S. college student and file-sharer who commented:

It's completely necessary to a free market. Without property rights, the capitalist system simply wouldn't function... Without copyrights, patents, this sort of protection, artists and inventors wouldn't be compensated for the art they produce, and thus, wouldn't produce so much of it. Copyrights are fine as they are right now. I just disagree with how the industry distributes their media.

However, it was more common for respondents to engage in a critique of the status quo. Many of these responses obliquely referenced the so-called the *balance of copyright law* as part of the critique. For example, a 35 year old IT professor and file-sharer from the U.K. explained:

The copyright law should create a short-term, artificial monopoly on copying and distribution of works in exchange for the works being released to the public

domain once that term is finished. It serves the purpose of creating an incentive to continuously create valuable works.

Alternately, a 25 year old programmer and file-sharer commented on U.S. copyright law:

The reason is the same as for having patent law: to make creativity (a.k.a. innovation) a viable livelihood. They both still serve that purpose. The problem is they do it too well, at the cost of denying people the freedom of doing what intelligent organisms do as a matter of biology: mimic/reproduce/copy ideas from which they get enjoyment/benefit. The Founding Fathers understood that copyright amounted to an exception placed upon liberty. They judged the copyright terms of that time to be a necessary evil for achieving the goal of having art (broadly construed) be a viable profession. The first Congress would've arguably been the most free of business influence and they thought [14] years was appropriate. If anything, copyright terms should have decreased over time as technology has allowed artists to be supported by larger and larger numbers of people at disproportionately low cost. The term of the infringement of liberty necessary to make art a viable livelihood has fallen through the floor. Yet in terms of the law, what has happened instead is precisely one of the possible outcomes they generally feared, factions gradually coming to have more influence on Congress than any realistic group of intelligent citizens.

Some respondents similarly felt that the duration of copyright protection was too long. This critique of the length of copyright terms was echoed by a 35 year old French file-sharer who stated:

The original reason for the copyright law was to grant a momentary monopoly to give an incentive to create. Now, the function it serves is essentially (and almost uniquely) to give insanely long monopolies to big corporate structures, to create a new kind of scarcity.

Other respondents identified the expanded duration of copyright protections with the protection of an outdated industrial model of information production. One 20 year old U.S. student and file-sharer responded that “Copyright laws' only purpose is to prop up an old-fashioned, outdated industry (recording/movies).” Similarly a 26 year old Swedish IT developer and file-sharer commented on the social and economic inefficiencies produced by copyright:

In practice it is an [effective] way to limit supply and keep their monetary gains. It keeps the public as consumers and companies as providers, and draws the line very strongly between them. The [publishers] are the real winners, the artists and the public are the losers. Copyright serves as a limiter of competition.

A number of respondents similarly linked the imbalance of copyright protections to a diminished public domain and a lack of innovation. There was a sense that technological development and copyright law were moving in opposite directions. As a 20 year old student and file-sharer from Denmark succinctly put it: “Original reason for copyright law: HELPING innovation. Function it serves now: DESTROYING innovation.”

Respondents offered a number of well-considered amendments to existing copyright law. There were many calls for a simple rollback of the duration of

contemporary copyright terms. There were also a number of proposals for expanding the scope of fair use—particularly as it might pertain to format-shifting and on-demand access. Still others argued that copyright law should only be enforced with respect to commercial distribution and that sharing should be exempt so long as no money was exchanged. A 26 year old engineer and file-sharer from Brazil commented that “If I were to change anything I'd remove any restrictions against sharing and reproducing for private [and non-profit] use.” A 28 year old physician and file-sharer from Cyprus advocated for a compulsory licensing system for consumers of music in which music would be distributed freely among people who paid a fixed fee. In a similar vein, other respondents pointed to the ideas coming out of the *copyleft movement* in which copyright holders use licensing arrangements to surrender a portion of their rights in the interest of facilitating the creation of derivative works. Still others considered more radical changes in the copyright system. A 16 year old student and file-sharer from Canada cautioned that “To change this approach would require a radical shift in the western mentality, and a distancing from capitalism.” This sentiment was echoed by a 25 year old technical services manager and file-sharer also from Canada who commented:

This is a much deeper discussion, so in short I think the purpose of a copyright law is based off our current way of viewing/handling things. I would argue that our current ways of life are not necessarily 100% "right" and therefore the laws based off it are also "wrong".

Or as a 29 year old academic and file-sharer from the U.S. put it with decidedly more flare:

[Copyright] is the product of a capitalist world view where cooperation and consideration of common good only occurs through coercion. It is a boot stomping down on humanity; blocking the conduits through which human culture may become enlightened.

These responses demonstrate a range of opinions on the way forward. There are numerous ideas about possible copyright reforms. Rollbacks in the duration of protection afforded to copyright owners, protections for format-shifting, on-demand access, and noncommercial sharing, compulsory licensing systems—even the complete abolishment of copyright law. However, there was considerably less variation with respect to the function of contemporary copyright regimes. Most respondents saw copyright as working disproportionately to the advantage of large corporations at the public's expense. Although these results were not altogether unexpected from a sample of file-sharers, their understanding of the political economy of copyright law is notable.

Question 4: How Should Musicians Feel About Peer-To-Peer File-Sharing?

Question 4 gave respondents a chance to voice their opinion on the relation between musicians and peer-to-peer file-sharing. The intent was to discover whether or not file-shares identified with musicians and perhaps identified with their exploitation by the music industry. Do file-sharers distinguish between industry and musicians? Are file-sharers concerned with the welfare of musicians or the effects of their practices on musicians' livelihood? I organized 293 responses into five categories presented in Table 7.8.

Table 7.8: How Should Musicians Feel About File-Sharing?

How Should Musicians Feel About File-Sharing? (n = 293)		
Response	Number	Percentage
Tool for promotion and distribution	218	74.4
Indicator of fan approval	58	19.8
Lost sales in general	24	8.2
Lost sales for established or celebrity musicians and major labels	19	6.5
Tool for leveraging donations	18	6.1

An overwhelming majority of respondents (74.4%) indicated that musicians should welcome the advent of peer-to-peer file-sharing as a new platform for the *promotion and distribution* of their music. Respondents referred to the decentralized nature of peer-to-peer and its potential democratizing effect for smaller and independent artists who are now able to bypass the record companies. Others (6.1%) pointed to the prospect of using file-sharing as a tool for securing donations from fans. In this sense, peer-to-peer was seen, alongside digital audio workstations and cheap personal computers, as one in a suite of new tools allowing artists to take advantage of new opportunities for dramatically lowered fixed and marginal costs. A 40 year old Canadian file-sharer commented:

They should see it as the best way to promote their music. Contrary to their agent and their music studio, P2P does not steal money from the artist. Artists have to realize that they no longer have a need for music industry executives. They can

promote their work on their own using the power of the internet. For example, Maria Aragon, [a] 10 year old with a YouTube account became an instant star! Same for Justin Bieber and Grayson Chance. If a kid can do it, anyone can!

Similarly a 20 year old file-sharer and student from the Netherlands commented on the new opportunities for up-and-coming artists:

As a musician, I feel that file-sharing is the ultimate goal of your work. As an artist, you are creating something either for your own enjoyment, or to see others enjoying it, and either way, you benefit from file-sharing. You're getting [your] name out there, thus more people will buy your releases, thus you will sell out more shows. Piracy is unstoppable without converting to a police state, so you may as well adjust. Piracy is not theft, it's promotion. The music industry hypes "stars" they themselves have created, but for proper artists piracy is the way to the top. As a musician and producer I have released almost all my work online for free. This way I have established a fan base and by selling extended, higher quality versions of some of the releases, and by giving the opportunity to donate, I can more than break even. No one says a musician should be rich, if I would quit college and full time tour and work in the studio, I could easily live off it, and that's all one can ask for.

Likewise a 42 year old studio technician and file-sharer from the U.K. explained:

Speaking as someone in the music industry, I say they shouldn't mind at all— providing it's a half-decent copy, it's just good exposure. Every sale made today is made by someone who either knows how to download high-quality pirate copies

of their music for free, or knows someone who can show them how. With very few exceptions, music consumers don't buy because they have to, they buy because they want to support the artist. Every track purchased is money they gave to the artist purely out of love for their music. Digital distribution (legal or otherwise) hurts the recording-industry's already-irretrievably-broken model of making fans buy 13 tracks on a CD to get the one song that they actually want – but that's already a dead marketing strategy, regardless of file-sharing. File-sharing cannot hurt musicians. If anything, an individual's engagement with a music-piracy site creates a much greater sense of community-motivated engagement with music and with artists in general. In the wider view, as someone who gets regular cheques from the PRS, I believe it's quite likely that most artists are now almost certainly earning more from piracy than from almost any other means of promotion.

A substantial portion of respondents (19.8%) indicated that file-sharing was a *marker of fan approval* for artists. That is to say musicians should see file-sharing as a type of adulation. For example, a 20 year old student and file-sharer from the Middle East asserted that “[Musicians] should feel great that somebody bothered to actually search their music so they could listen and enjoy it.” This sentiment was echoed by a 22 year old minimum wage earner and file-sharer from the U.S. who observed “They should feel at least a little good that someone went out of their way to break a law to listen to their creations, especially since it is easy for some to be tracked and prosecuted for it.” Additionally, the potential for peer-to-peer file-sharing to be used as part of a new

business model based on *donations* was mentioned in 6.1% of responses. For example, a 19 year old electrical engineering student from Australia commented “What I would want is for every musician to have a donation website so that anyone who has downloaded their music and likes it can donate money to them directly instead of buying their album.”

However, not all respondents were as optimistic in their assessments of the relationship between musicians and file-sharing. A portion of responses (8.2%) indicated some concern that peer-to-peer file-sharing could potentially result in *lost sales* for artists. As one 19 year old student and file-sharer from Bangladesh replied, “[They should feel] threatened. I don't see how they can embrace it unless they're willing to give their stuff away for free.” Interestingly though, another portion of responses (6.5%) made the distinction that *establishment artists would be more negatively impacted* by file-sharing because of their reliance on outmoded business models. A 24 year old unemployed file-sharer from the U.K. explained:

Seems to depend on whether they've already made it or not. The old successful artists seem to quite dislike it, seeing as they're so well established and well-known already they have no need to harness the insane promotional potential of music filesharing. I think they also tend to be up in the inner circle with the record companies as it were and so [they] get roped into anti-filesharing campaigns quite a lot. Up-and-coming artists or even aspiring up-and-coming artists will from now on live or die by how they use p2p as a promotional tool. They simply cannot afford not to do this now if they ever want to get known outside their

hometown....Eventually a majority of artists should be 'self-publishing' and not signed to some record company.

These responses indicate that file-sharers are fairly uniform in their perception that peer-to-peer systems afford a greater number of musicians more opportunities than the previous models championed by the recording industry. Rather than a threat to musicians' livelihoods, file-sharers seem to view their own activities as a form of free labor in the service of promoting and distributing the artists they love. As a 25 year old software developer and file-sharer from Russia put it when asked how musicians should feel about peer-to-peer file-sharing, "The same way flowers feel about bees."

QUESTION 5: DO YOU THINK THE MAJOR RECORD LABELS OR THE RIAA ARE CONCERNED ABOUT THE WELFARE OF EITHER MUSICIANS OR MUSIC FANS?

The purpose of this question was to explore the structural dimension of signification by giving respondents a forum to express their views about an industry which has singled them out specifically for legal action. If the conflict with the industry has resulted in a relatively uniform sentiment among file-sharers, then resistance itself becomes a resource for file-sharers as they derive social cohesion through ascribing similar meanings to the conflict with the industry. Given the international character of the sample, the question would have been better worded had it not limited the focus primarily to the RIAA. Nevertheless, I received 278 responses to this question. Even though I anticipated a strong response by file-sharers with respect to the RIAA's treatment of music fans, I was struck by the fact that respondents overwhelmingly viewed the RIAA as unconcerned with the welfare of musicians. In fact, not a single respondent made a

strong case in the affirmative on either point. Where respondents were willing to acknowledge concern by the record labels or the RIAA, it was always contingent on a concern for their own economic well-being. For example, a 22 year old U.S. soldier and file-sharer stated:

Whether or not the listed groups are concerned about the welfare of musicians is debatable—the RIAA does put a great deal of time, effort, and capital behind fighting for the rights of musicians, however the record labels tend to focus on making money, often at the expense of the artists and the overall quality of the music.

One of the more generous characterizations of the industry came from a 25 year old student and file-sharer from the Czech Republic who answered:

Well, yes. They have to treat musicians good to make good music. Can it be better? You bet. But I don't think they're treating musicians bad. They can give them more money, sure. And [the] RIAA should give them money from [the] lawsuits –as far as I know it's not happening. And about fans - my feelings are somewhere in the middle.

The fact that none of the money received by the RIAA during the litigation campaign found its way into the hands of musicians was a recurring theme. A 21 year old student and file-sharer from Canada commented:

In all cases where restitution or levies are collected by the RIAA or similar organizations, where the money is supposed to be distributed to the artists, it has been continuously fed into the bureaucracy. The RIAA doesn't care about the

artists; they feed them a pittance and treat them like shit. The RIAA treats its customers like criminals.

Some responses emphasized the general economic exploitation of musicians under the RIAA and major labels as evidence that the industry does not have musicians' best interests at heart. A 23 year old student and file-sharer from the U.S. typified this sentiment by stating "I doubt they are concerned about the welfare of musicians, otherwise they would pay those musicians much more than the minuscule percentage which I have heard they do." A 25 year old file-sharer in Bangladesh agreed: "No, they are not concerned with the welfare of musicians; the fact that musicians receive less than 10% of the cost of a physical album, and the existence of 'mass-production' pop music confirm it."

Predictably, there was little or no sympathy for the industry when it came to the treatment of music fans. A 24 year old unemployed file-sharer from the U.K. typified this sentiment:

They don't give a rubbery fuck about either. They fuck the majority of their artists with contracts better described as indentured servitude, and they are actively contemptuous towards their actual customers who they view as nothing but walking wallets and not fans who like or even give a shit about what they produce. This is the difference between an artist and his record company I feel, and why the two must be separated eventually for the cultural common good.

Suffice it to say, there was an abundance of colorful diatribes against the major record labels and the RIAA. The antagonism runs deep. But the anger was directed

specifically at the industry—not the musicians. In general, respondents identified with musicians. Perhaps this should come as little surprise as music fans are likely to feel some personal attachment to the creators of the music which they enjoy. What is significant though is that many file-sharers feel that they are on the same side as the musicians. In this sense, the free labor of file-sharing is a replacement of an older, less efficient mode of centralized distribution. The antagonism with the industry stems in part from the impact of lawsuits targeting those individuals caught up in the driftnet. Yet it also stems from the recording industry's attempts to stop the practice of commoning while preserving a less efficient and centralized mode of production and distribution. The general feeling among respondents was that the industry demonstrates no concern for the welfare of either musicians or fans in its quest to institute highly restrictive forms of social interaction. As the above quotation asserts, the artist and the record company must be separated for the cultural common good. Alternately a 28 year old engineer and file-sharer from India offered the analogy of a mother and child:

A mother's child starts walking; she encourages him to walk even though she knows that someday the child will be on his own feet and will visit her [only] once in a while...She is concerned about [the] child's safety even when child is taking steps to be away from her but she teaches child how to walk [anyway]. The music industry is concerned [that] people will start walking. But instead of teaching them, they are trying to cut [their] legs off.

In the face of a digital music commons, the industry is left with two options: assimilation of the commons or destruction of the commons. The RIAA litigation

campaign and its progeny represent the latter approach. With respect to the former approach, the problem for the RIAA and the major labels is that there may not be a place for them.

Question 6: Do You Consider People Who Share Copyrighted Materials Over Peer-To-Peer Networks To Be Criminals? Why or Why Not?

In much the same way as the previous two questions explored the antagonism surrounding file-sharing by requiring respondents to consider their relation to musicians and the music industry, Question 6 explores the structural dimension of signification by asking file-sharers to respond to a negative characterization of their social worth. I received 276 responses to this question. A number of respondents (6.2%) were quick to point out that copyright has traditionally been a matter of civil not criminal enforcement. A small number of respondents (9.1%) admitted that while file-sharing may technically run afoul of copyright law, it was a minor offense unworthy of such a serious label. These respondents often drew comparisons between file-sharing and minor offenses like jaywalking, speeding, running red lights, or an assortment of victimless crimes. An 18 year old student and file-sharer from Belgium stated:

Definitely not criminals. Criminals kill people, rob stores, commit fraud, etc. I'd place file-sharers on the same level as people who cross a red light. Yes, they shouldn't do it, and yes, it's about the law, but then again, you don't really care. The damage they cause is rather low and maybe even non-existent and you definitely wouldn't call the police if you observed someone doing it.

One 39 year old U.S. file-sharer formerly from the music industry felt that it depended on the type of content being shared:

I'd consider people who share, say, cracked software, video games, & movies to be more criminal than music file-sharers, as those companies have a lot more invested in their projects/artists.

Respondents sometimes asserted that theft was a poor metaphor used to advance the industry's argument about lost sales which was flawed due to the likelihood that many file-sharers wouldn't purchase the content anyway if it weren't available for free. Another common response (14.9%) emphasized the non-commercial nature of file-sharing. As long as individual file-sharers were not profiting from their activities, there was nothing immoral about it. When asked if they thought the criminal moniker was appropriate, a 22 year old student and file-sharer from the U.S. responded:

No I don't, so long as they aren't making a profit. A criminal gains something by doing the crime - what does a file-sharer gain? Nothing that's what. They don't lose anything, but they don't gain anything either by sharing files. It's like sharing your bag of candy with a friend, if that bag of candy were bottomless that is. You never lose the candy.

As with the above quotation, the notion of public goods theory and nonrival commodities figured prominently in a number of responses (18.8%). These responses argued that theft was impossible due to the nonrival nature of the commodities in question. As one 27 year old artist and file-sharer from Germany summarized, "How can I steal something that cannot be owned?"

Another group of responses (26.1%) emphasized the growing gap between law and cultural practices brought on by recent technological developments. The basic premise of these responses was that as a majority of the population adopts new methods for confronting cultural artifacts, these methods can no longer legitimately be considered criminal. A 20 year old software developer and file-sharer in the U.S. asserted:

Laws are designated by society to curtail behavior that society as a whole frowns upon. A criminal breaks the law, but the law had to be first decided upon by society. File-sharing is socially acceptable and the laws should change to reflect that. If a law in place is such that a significant majority of the population is a criminal, then it shouldn't be a law.

Other respondents took this same critique and framed it in a decidedly more political rhetoric arguing that disobedience to a socially unjust law did not constitute a crime. As a 20 year old security guard and file-sharer from Canada proclaimed, “No. It’s civil disobedience. We can’t abide by unjust laws. We have a right to information.” And a 25 year old file-sharer in Bangladesh elaborated on the global dimension of the protest against copyright regimes:

Copyright Law has continued to fail to update fair usage rights for the internet, which the global public has been using for at least 2 decades now. The copyright holders charge exploitative prices for purchase of their property, which forces the once-paying public to peer-to-peer systems both to satiate reasonable demand as well as a form of mass civil disobedience and protest. The problem is further

exacerbated in developing economies, where a copyrighted work's purchase can eliminate entire portions of an average individual's annual income...

Still other respondents felt that the label of criminal was more appropriately applied to the industry and their allies in government. As one 24 year old unemployed file-sharer from the U.K. responded:

As I said I did and I may still have some moral reservations about what I do, had I not known that the companies I'm ripping off are some of the most fucking evil in the world. How dare those cocksucking american corporations get the cockingsucking american government to pressure my goddamn supposedly sovereign british government to implement preferential laws on their behalf in what can only be described as a rape of the democratic process which millions have died to secure for us (going as far as to actually write the goddamn legislation and telling our lawmakers to do as their told and pass it). Who the FUCK do they think they are?

Interestingly, another group of respondents (24.3%) indicated that they felt like their actions were, if anything, socially desirable. While the term criminal implies some antisocial behavior, these respondents were just as likely to argue that sharing should be encouraged. As a 32 year old file-sharer from Belgium imaginatively explained:

From a religious point of view, I think file-sharing is the modern-day equivalent of the miracle Jesus performed with those loaves and fishes (and the one at the wedding in Cana, too). I'm pretty sure the fishmongers and bakers (and wine-sellers) weren't too happy with Jesus "copying" their fish and bread (and wine)

and "seeding" it with five thousand people (or with the invitees to the wedding). I'm sure they lost a lot of sales (after all, if you want bread you go to the baker, you don't just copy a loaf and share it with everyone), and those people did indeed get fed without paying. Why we consider that a miracle and filesharing a crime is still beyond me.

Ultimately the vast majority of respondents seemed uncomfortable with, if not totally opposed to, the criminal label. Their reasons emphasized the unique character of information commodities and the poor fit of criminal metaphors. They also saw their activities as distinctly noncommercial and therefore not criminal. Respondents also pointed to the disproportionality of the reaction to file-sharing relative to serious crimes. One 25 year old German file-sharer shared a German word which captures the outlandishness of the whole debate: *Raubmordkopierer*. Roughly translated it means burglar-murderer-copier. A 32 year old media manager and file-sharer from Finland offered some alternative monikers in lieu of criminal or pirate: trailblazers, pioneers, necessary deviants, revolutionaries.

Question 7: Tell Me About The Actual Practice of File-Sharing. How Do You Learn the Necessary Skills To Be a Peer-To-Peer File-Sharer? What Resources Do File-Sharers Have At Their Disposal? Are There Websites or Other Internet Resources Which Provide the Information Necessary To Use Peer-To-Peer Networks Effectively?

The intent of this question is to begin to uncover the structures directly implicated in the practice of file-sharing. These systems involve more than the handful of peer-to-

peer platforms mentioned thus far. File-sharers rely on a range of resources to coordinate their file-sharing activities. File-sharers are invited to reveal these resources so that I can begin to map the intersecting resources implicated in file-sharing. I received 277 responses to this question. I have organized the resources mentioned by respondents into the five broad categories which follow.

(1) Common Web Resources

The most striking aspect of the resources implicated in peer-to-peer file-sharing is their abundance and ubiquity. A 45 year old unemployed file-sharer in the U.S. vividly explained:

The tools for peer to peer file-sharing are quite literally everywhere....The internet in regard to this matter is like a secluded parking lot and you start looking around and you see money just lying around then you see a sign next to the parking lot that tells you not to pick up the money because you could be fined some big huge amount or spend time in prison. There's the sign but you don't see any cops around, and sometimes you see other people walking by and they pick up a wad or two of bills and go on their way. Maybe you exercise self control and leave the parking lot without picking up any money. You wander around some more and find more and more places just littered with money, but there are these annoying signs saying not to pick it up. How long is it going to be before you pick up some of that money just to see what happens if for no other reason? Because you can wander around this place for years and keep coming across all this money

lying around and the only thing that says that it can't be yours are those signs.

That is about how easy file-sharing on the internet is.

Many respondents indicated that the learning curve associated with file-sharing is negligible. File-sharing applications have become increasingly easy to use and there exists a wealth of readily available online tutorials. A mantra common among respondents was Google is your friend. A working knowledge of Google's search engine is all that's required to learn the ins-and-outs of file-sharing. Sites like YouTube and Wikipedia were cited by a number of respondents as good sources for tutorials and general file-sharing information, as were the FAQs provided by many peer-to-peer application developers on their own websites. All in all, there are no high barriers to entry into the world of peer-to-peer file-sharing.

(2) General Tracker and Index Sites

In comparison to previous generations of file-sharing applications, BitTorrent users are saddled with the additional chore of figuring out how to locate torrent files. Yet here too there are abundant resources available to file-sharers. Torrent indexes are maintained by a number of websites for file-sharers to search through. *Indexing* is not to be confused with *tracking*. Recall that tracker websites facilitate communication between peers attempting to access a torrent. In practice though, many websites function as both BitTorrent indexes and trackers. There are an abundance of BitTorrent tracker/index sites helping to coordinate file-sharing activities. The Swedish website The Pirate Bay is a

well-known example of a BitTorrent index.⁸⁸ The previously discussed isoHunt is also a familiar BitTorrent tracker. Demonoid is another celebrated BitTorrent tracker founded by an anonymous Serbian file-sharer. Many of these websites provide users with a number of extra resources including IRC channels dedicated to file-sharing topics, private messaging, search-based RSS feeds, and discussion forums. File-sharers can locate many of these sites using a reference site like www.torrentresource.com which maintains a large list of torrent websites.

(3) Dedicated Peer-to-Peer Forums

In addition to the discussion forums provided through BitTorrent tracker and index sites, there are a number of websites dedicated to the topic of file-sharing. These sites provide discussion forums, news articles, editorials, and tutorials, all dedicated to the topic of file-sharing. Zeropaid.com is a website launched in 2000 that provides news and discussion forums as well as a host of software applications to assist users in everything from playback to format-shifting. Also launched in 2000 is Slyck.com, another website dedicated to file-sharing which provides news, reviews, editorials, and a discussion forum. p2pnet.net is a news website dedicated to covering stories involving peer-to-peer file-sharing. I asked Jon Newton, the founder of p2pnet.net, about the site's inception. Newton (personal communication, December 28, 2010) explained:

I started p2pnet.net as a music (not file) sharing site, with MIDI (Musical Instrument Digital Interface) as the medium. The idea? Post mp3s (or other

⁸⁸ At one time The Pirate Bay functioned also as a tracker, but the site discontinued those services in late 2009 (Mennecke, 2009, November 17).

formats) of music under a Creative Commons license so other people could hear it. MIDI files are tiny so you can email them to someone else who can add a lead guitar line, say, or maybe improvise on the keyboard section. That person can then email the new version to someone else, and so on. Or if you'd made an mp3, someone else could add to it, record the results and pass it on. Then mix it. And jam to it. Do whatever you want with it. Except use it for commercial purposes without prior agreement. That was in 2002 and a lot of stuff that's routine now hadn't happened back then. Then I got interested in the way Vivendi Universal, EMI, Warner Music and Sony Music were screwing their own customers and p2pnet went way off topic and became a digital news and advocacy site.

TorrentFreak.com is another popular example of a dedicated peer-to-peer forum. Started in 2005, TorrentFreak is a blog dedicated to providing news, tutorials, and other useful information for file-sharers. I also asked TorrentFreak's founder, who goes by the alias Ernesto Van Der Sar, about the site's beginnings. Ernesto (personal communication, December 9, 2010) explained:

TorrentFreak was started in 2005 as a weblog where I intended to share some tips and tricks on how to use BitTorrent. In the months that followed I started to focus more on writing short news items related to file-sharing and BitTorrent. In the years that followed the weblog slowly turned into one of the most authoritative news sources on file-sharing and copyright issues. The focus of our articles has always been on providing fresh news or a unique analysis of current events and I

believe this attracts both file-sharing users and followers of the digital copyright debate.

(4) Anonymity

File-sharers use a variety of resources to mask their activities. For example, many file-sharers funnel their Internet traffic through a different IP address by using a Virtual Private Network (VPN) service, effectively hiding their activity. VPN services work over the Internet and encrypt information between two networked devices which are not on the same private network, obscuring their transmissions from intermediate networks. File-shares also often use *seedboxes* to hide their activities. A seedbox is a private dedicated server that allows file-sharers to remotely control a peer-to-peer client for uploading and downloading. Once the seedbox has acquired a file, the user can then download it using a secure FTP connection. File-sharers may also access the distributed overlay network known as Tor to mask their activities. Tor uses a client application and a network of servers utilizing multiple layers of encryption to thwart attempts at traffic analysis. VPNs, seedboxes, and Tor are all used by file-shares in an attempt to conceal their IP address in swarm downloads with varying degrees of success. One last anonymizing application cited by a number of respondents is the open source program PeerBlock. This software functions to block packets originating from a list of host addresses. The lists are frequently updated and include suspected hosts for Internet snoops and the media industry's copyright trolls.

(5) Private Tracker and Index Sites

Private trackers are BitTorrent trackers which restrict their use to members who have registered with the site, most often through an invite-only system. Most of these sites enforce some minimum upload-to-download ratio while offering higher access speeds, more vibrant communities, and safer downloads. Private sites are in some sense an evolution of public tracker sites as BitTorrent users adapt to increased threat levels. A 21 year old student and file-sharer from the U.S. explained:

Private torrent sites...are places where many people with similar interests gather, and someone who wants to can quickly learn how it works, and how to follow the quality control rules. Such torrent sites are basically libraries of media (whether it be music, movies, or TV shows), with better quality and organization, and more choices of content and format, than any existing store, online or physical.

One of the first private sites was Oink.cd which was established in 2004 before being shut down in 2007 by British and Dutch authorities following an investigation by the International Federation of the Phonographic Industry (IFPI) (Phan, 2007, October 26). The site's closure made little difference however. On the same day Oink was closed another popular private tracker dedicated to music, What.cd, was founded. Today there are numerous private tracker sites dedicated to a variety of content types. For example, www.thebox.bz is dedicated to British television shows, www.blackcats-games.net is dedicated to games, and www.bakabt.com is dedicated to anime. The role of private trackers is increasingly central to coordination of file-sharing activity and to the sense of

community among file-sharers. As a 24 year old unemployed file-sharer in the U.K revealed:

What I and a lot of people like I think is the sense of community and the social aspect to the whole thing. You can go on what.cd and discuss your favorite band with other fans who will also help you with technical stuff. Or you can go to iTunes and get reamed for 99 pence per track and be made to feel that you're a mindless cog in a consumerist machine handing the money over to a faceless monolith of a company who doesn't give a shit about how you feel about the band. The social aspect to the whole p2p scene is a very important part I think, perhaps one of the main driving forces behind it in fact.

In general, respondents revealed a variety of web-based resources in addition to the peer-to-peer client application which they use to coordinate their activities. Some of these resources function primarily as a decentralized appendage of the file-sharing application, allowing users to locate and access content. Other resources help users conceal their activities from prying eyes. And still other resources keep the community of file-sharers up-to-date on any number of social and technological developments.

Question 8: Is There a Community of Peer-To-Peer File-Sharers? If So, What Evidence Is There of Its Existence and What Do You Think Holds It Together? If You Do Not Think There Is a Community of Peer-To-Peer File-Sharers, Please Tell Me Why You Feel That Way.

Here respondents are invited to further consider the social aspects of file-sharing. There was no formal definition of community provided for survey participants as the

intent was not to arrive at some generalizable conclusion. Instead, this question is in keeping with the previous question to some extent in that it continues the exploration of the social structures implicated in peer-to-peer file-sharing. I received 267 responses to Question 8—out of which only 15 (5.6%) definitively ruled out the possibility of a community of peer-to-peer file-sharers. For example, a 40 year old self-employed file-sharer from Canada dismissed the notion of community by invoking BitTorrent's structural coercion to enforce sharing:

There is no community per say as all those file-sharers don't know each other. They are just random people who want the same thing. Sharing happens most of the time by obligation. [BitTorrent] will share the pieces you have while you download other pieces. You really don't have a choice.

However, other respondents looked beyond the immediate functions of the BitTorrent clients. For example, a 32 year old student and file-sharer from Germany commented:

There certainly is a community of people talking about this and being active, even politically active, that are in some way interconnected. But the actual file-sharing is mostly done by people who do engage in common communal activities. They mostly don't even know each other. Their only interaction is in the practice of file-sharing itself. But this practice has all the hallmarks of social structure. It has clear roles: seeders and leechers, to use torrent terminology, administrators of boards or servers, and the people who write the software. It has norms that are enforced, often focused on keeping out people who only leech without

contributing, but often also general rules of etiquette. It has the awarding of social status for people who share a lot or who introduce certain desired content into a particular group. Which already makes the second point: The file-sharing is done in more or less selective and exclusive interaction groups, often centered around a certain piece of p2p tech or certain kinds of content and those groups certainly qualify as communities.

Some respondents (7.5%) qualified their belief in a community of file-sharers by drawing a distinction between active and non-active members. Respondents pointed to the hierarchy among leechers, seeders, and release groups. For example, a 21 year old filmmaker and file-sharer from the U.S. argued:

There absolutely is a community. Commenters on Pirate Bay torrent listings or TorrentFreak posts are members of the P2P community. Members of forums such as Suprbay are members of the P2P community. Members of local Pirate Parties are absolutely members of the P2P community as P2P is the entire foundation for the Pirate movement. Casual file-sharers who don't get involved in these community hubs or don't think very much about the freedom issues surrounding by P2P are not necessarily members of the community, but they can be as soon as soon as they become active.

Many respondents (28.5%) were hesitant to speak of a single peer-to-peer file-sharing community. Instead, they described it as a collection of a large number of small communities. A 42 year old file-sharer from the U.K. responded:

"A" community? No. There are many, many, many communities of file-sharers, all interested in different things. I know this, because I'm in a number of them myself. We hang out on the 'net and have a laugh or a cheer when times are good or a rant or a cry when times are bad. Same as the rest of civilization, really.

Similarly a 17 year old student and file-sharer from the U.S. commented:

...the actual file-sharing occurs in smaller communities. For example, there are many private torrent sites have forums and chat rooms to create a community. In small sites, community is very important: If someone isn't sharing enough (i.e. has a small ratio) they will usually be removed from the community. IRC is another great example of where file-sharing communities can prosper. IRC supports chat and file transfers, so it's a perfect place for file-sharers to talk while they share files.

Respondents were also keen to point out that there was considerable variation in these smaller communities from forum to forum, site to site, and platform to platform. A 25 year old file-sharer in the Netherlands explained:

There are many communities. Each focused around a favorite way of file distribution (like usenet, or specific torrent sites) or type of content (for example rock music, high-quality copies of movies, or the latest TV shows). Many active file-shares will probably belong to at least several of these communities, piecing together the parts of his own preferences.

A number of respondents (28.5%) pointed to the participation in public tracker sites, forum discussions, comments and reviews as evidence of community. Still other

respondents (16.5%) pointed to the closed groups and private tracker sites with their highly regulated social norms as evidence of community.

Respondents also attributed social cohesion to more artifactual causes. A number of respondents (7.5%) argued that particular peer-to-peer systems, methods, distribution channels, protocols and tools provided a degree of social cohesion. Other respondents (22.5%) argued that particular media content or genres provided the social cohesion among group members. For example, a 39 year old file-sharer from the U.S. spoke of a private community dedicated to comic books and the dedication of enthusiasts who scan and preserve old and obscure comics. A 25 year old technician and file-sharer from the U.S. spoke of a file-sharing community known as *fansubs* who are dedicated to the translation of anime. And a 20 year old student and file-sharer from the U.S. spoke of the American-based fans of *Dr. Who* who have no way of accessing the program except through their collective efforts as file-sharers. It may be tempting to dismiss the social cohesion produced by these shared interests as superficial. However, as a 41 year old financial analyst from the U.S. demonstrated, nothing could be further from the truth:

I know that I regularly visit a "niche" community that provides content based on shared interests. As a gay man, the gay p2p community isn't just a community of file-sharers, as there is content and discussions related to social and political issues. The members of the community are from all over the world, and [are] a melting pot of ideas, thought and opinion. The fact that they have gay themed films, television shows, and pornography is almost an after thought. Years of social and political derision and pressure holds the gay torrent community

together. There are large online gay communities all over the web that do not have the p2p component, so I don't believe it solely reflects p2p file-sharers. Most people in the global gay community remain obsessed with the government sanctioned discrimination we experience daily, regardless of whether you live in the US or Djibouti. We are horrified that whether you live in Kenya or Egypt that you can be executed for who you love, or subjected to corporal punishment for self expression. There are kids in Ghana inspired by Glee, and lesbians in Latvia livened by episodes of the L Word, and for them p2p file-sharing is the only way they can access this content. If one person in our global community can endure the oppressive political regimes and bigoted social climate, and finds some inspiration from positive role models in films, television episodes, and music that these p2p services provide, I say AMEN to that!

However, can we say that the phenomenon of sharing alone provides the basis for social cohesion? Is there an ideology of commoning lurking among some file-sharers? Many respondents (22.5%) indicated that an ethos of sharing provided social cohesion among file-sharers. Consider the comments of a 26 year old file-sharer from the U.S. who stated:

It is for sure a community. We mostly all share the idea and belief that information and ideas cannot and should not be owned by one person. Proof of this is that as you can see that many people risk being jailed and fined to share this information and ideas with the rest of the community. We all try to help each other.

Or consider the comments of a 31 year old unemployed Scandinavian file-sharer who asserted that:

A friendly community not run by greed is flowering. The reason why there are so many and still around after so many years is people are free to share, free to speak their mind. Free to be the person the "real" world will never see. People got an online identity that can become more real than their real lives. The respect for being a good uploader, a good sharer, a helpful person on the forums, it's all about freedom, respect and kindness.

These comments and others speak to the gift economy which undergirds the social structure of the peer-to-peer community. The ethic of sharing provides a framework of social cohesion on to which a multitude of communities of shared interests can be grafted. Or as one unemployed 34 year old Canadian file-sharer put it in a clever play on Richard Stallman's famous statement, "There is a community, free—as in beer—holds it together."

But this tradition of free and decentralized access also occasionally spills out of the file-sharing community and manifests as the collective political actions of groups like the Piratpartiet or Anonymous. In fact, a small portion of respondents (6.7%) pointed to real world political parties like the Pirate Party as strong evidence of community among file-sharers. An even larger percentage of respondents (11.2%) argued that antagonism felt by file-sharers toward groups like the RIAA and MPAA provided the necessary social cohesion for community. In other words, the coercive exercise of power by media

trade organizations has been sufficient to constitute file-sharers as a class of people actively engaged in struggle.

Question 9: What Has Been the Effect of the Recording Industry Association of America (RIAA) Lawsuits Targeting Individual File-Sharers?

The final question asked respondents to reflect on the impact of file-sharing litigation. Again, considering the diversity of the nationalities of survey participants, the question would have been better worded had it not emphasized a U.S. trade organization. Nevertheless, I received 275 responses, the vast majority of which were well-thought out deliberations on the relationship between law and the practice of file-sharing. I organized the responses into the six categories which appear in Table 7.9.

Table 7.9: What Has Been the Effect of File-Sharing Litigation?

What has been the effect of file-sharing litigation? (n = 275)		
Response	Number	Percentage
Minimal effect	146	53.1
Increased antagonism	121	44
Greater P2P innovation	89	32.4
Abuse of court resources	45	16.4
Some limited deterrence	36	13.1
Missed business opportunity	34	12.4
Mitigated by pre-established behavior or practices	15	5.5

By far the largest category of responses (53.1%) included those which indicated that file-sharing litigation had *minimal impact*. These responses ranged from those which asserted no discernable effect at all to those which argued that the litigation had actually increased the amount of file-sharing. Futility seemed to be a recurring theme as many respondents drew comparisons to the war on drugs. A 22 year old soldier file-sharer from the U.S. observed:

There are, and will forever be, more people sharing files than any litigator, or threat of litigation, can hope to target. All the court cases against file-sharers, even if counted as one cohesive effort, amount to trying to stop a rainstorm by shooting individual drops of water.

Some indicated that the global dimension of file-sharing also mitigates the ability of litigation to influence behaviors in spite of the establishment of a global intellectual property regime. For example, a 19 year old student and file-sharer from Bangladesh offered:

...you really can't stop it unless there is a change in the mindset of the population. Laws for example work so well in the USA is because the general population feels it their duty to follow them and be a good citizen. Whereas in our country, no matter what laws and how many police officers you have, the Bangladeshi people don't follow laws because they are blatantly crass and don't have it in their mindset. You can't stop p2p unless you can convince the general population that it is really really bad.

Other responses seemed to indicate that as long as there was a demand for better terms of access to content, file-sharing would thrive. This category of responses (12.4%) emphasized the *lost business opportunity* on the part of the content industries for not embracing file-sharing early on. A 34 year old PC technician and file-sharer from the U.S. typified this position in stating:

When tech changes, the smart thing to do is get in quick and ride the wave, not pretend you can stop the raging water. Apple capitalized with iTunes to the squealing torment of the distributors because the recording industry is led by sloths.

Or as an 34 year old financial analyst and file-sharer from Australia put it:

Until something is done to make music/tv/movies—even games—more readily available in ALL regions and priced accordingly (e.g. they sell the same thing for different amounts in different regions for no good reason), p2p will never end.

Targeting individuals or groups will not stop the "need" that is there, which is the root cause.

Many respondents (5.5%) also emphasized the futility of litigation in the face of a cultural habit of file-sharing taking root among younger generations. For example, a 24 year old office clerk and file-sharer from the U.K. commented “[Today’s] youth when older will pirate more as they now believe that data on the net is a free right.” And there were those respondents who felt like litigation campaigns targeting file-sharing were

likely to achieve the exact opposite of their intended effect. A 36 year old programmer and file-sharer from Canada observed:

The [irony] is that the RIAA has single handedly increased the number of people in the file-sharing community. In the early days, every PR announcement of a site or individual being sued only increased the public awareness of file-sharing in general.

Still, there was a portion of the responses (13.1%) which indicated that the litigation *likely did deter some number of file-sharers* from participating in peer-to-peer networks though the number was likely to be small. A 32 year old file-sharer from Finland commented:

Lawsuits won't stop large numbers, but warning letters might: as long as you are flying "under the radar" with the illusion that nobody knows, why NOT carry on? But even a single letter, with or without the threat or penalties, would make me drastically reduce my activities, because of the feeling of "I'm being watched!!!! How much can they see and what?" And the same would go for a lot of the non-hardcore downloaders, especially the children, the older adults, the women. Only young adult males would remain in a "fuck it!!!" mode...

Similarly, another category of responses (16.4%) included those which emphasized the *abuse of court resources* and immediate impact to those caught up in the driftnet of lawsuits. For example, a minimum wage earner and file-sharer in the U.S. stated:

...I would say they've made some people REALLY broke. People they know may or may not have continued to download illegally after that, a few might not because of the stories, but as it shows, a lot of people still do, obviously don't care, and are going to continue to do it until they're slapped on the hand as well.

A large portion of the responses (44%) included those which characterized the litigation as *unjust* and asserted that the whole episode had served to *deepen the antagonism* felt toward the industry. As one 22 year old student and file-sharer from the U.S. said:

The effect has been annoyance, disgust and unpopularity. I think at this point they could even be more hated than the IRS and their employees. If I were to meet one on the street, I would tell them to go to hell and walk away so that I don't do something else. If their addresses and phone numbers were ever made public, you can bet that they would be harassed nonstop. Nobody fears them. Targeting large numbers of file-sharers won't work either, it will just incite the mob and sooner or later somebody will do something stupid. I have heard in the times I went into the Pirate Bay forums, how much people want to set fire to the RIAA employee houses, and how much they want to bomb their headquarters. Would you really want to test that? I wouldn't.

Some respondents indicated that the outrage at the litigation campaign served as a resource to strengthen the file-sharing community. As one 22 year old retail worker and file-sharer from the U.S. observed:

The lawsuits have galvanized file-sharers, and made many people who were not a part of this cultural movement more aware of what is happening. The lawsuits have not resulted in more music being purchased, but neither have they caused less to be sold. I also doubt that many file-sharers have been discouraged from their activities. Instead, prominent members of the file-sharing community have become politically active in fighting against the industry and their influence.

The above sentiment was extended by a final category of responses (32.4%) in which respondents spoke of the *greater levels of peer-to-peer innovation* stemming from litigation campaigns and other legal attacks. Respondents mentioned better peer-to-peer applications, the adoption of new measures to maintain anonymity, and the reliance on private tracker sites. For example, a 24 year old student and file-sharer from Canada commented on the development of better peer-to-peer platforms in the wake of file-sharing litigation:

At the same time, the lawsuits against the companies who produced the software needed to share (e.g., Napster, KaZaa, Grokster, LimeWire, etc.) have then fostered further innovation and development in new software programs, making the RIAA's life more difficult. Peer-to-peer file-sharing has often been compared to hydra, an analogy which I think is apt.

Another file-sharer, a 16 year old from the United Kingdom, offered a detailed description of the security measures taken by file-sharers in response to the attacks:

The effect of busts (raids) against individual file-sharers have only made the file-sharing scene stronger, using more advanced levels of protection from BNC's

(bouncers), FiSH (1060-bit encryption) and using Explicit/Auth TLS SSL encryption for any kind of information sent over the internet. So on IRC (internet relay chat) you connect to a server using 256-bit SSL encryption and then on top of that you set a FiSH key to encrypt anything said over that network, whether it is in a channel or a private message (everyone else who is meant to be there will know the decryption key (Fish Key), but for people trying to wire tap/sniff the network all they will get will be random characters so two levels on encryption is necessary to make sure no one who is not meant to know what is being said does not. When connecting to a topsite you have an addline, an addline is a setting for your account that only lets you connect from a certain IP, or if you are dynamic it will be set with wildcards such as 72.123.*.* - all passwords used are different for every single thing you log into and are randomly generated 7-21 character passwords including symbols, numbers and regular characters example: bds-Reyx42kL*v0+Y_)b also when connecting to IRC your IP will be hidden with a BNC as mentioned above, no one ever goes near any network without hiding it, it is obviously your personal identity on the internet.

The increased reliance on private tracker sites was also cited by numerous respondents as a direct result of the targeting of file-sharers. These private tracker sites are an interesting counterpoint to the increased reliance on anonymity detailed above the cumulative effect of which has been a more decentralized and anonymous file-sharing community with emerging pockets of stronger social ties.

CONCLUSION

This survey begins to reveal a more nuanced understanding of file-sharers than those offered by previous analyses framed by criminality or market terminology. It is true that file-sharers in most legal contexts are violating the law. It is also true that many of the complaints enumerated by file-sharers fall within the theoretical field of market analysis. Yet it is also true that file-sharers engage in a highly social activity characterized not by amorality but by an abiding respect for musicians and each other. It is also true that the antagonism produced by the industry's attempts to eliminate the commons serves as a resource for its constant innovation and vitality. In this sense we can also speak of a *resistance commons* in addition to the various dedicated forums, technological tools, and user demands which define the coordinated activity of file-sharers.

Contemporary peer-to-peer systems have a long and rich history reaching back to the advent of the Internet itself. As social systems they have tremendous explanatory power for the trajectory of capitalist development in the sphere of information production and distribution. But their study must exceed the lens of both legal and economic analysis. The conflict between commoning and commodification is over the social surplus of information production, and both sides in this conflict are used to having it their way. But the attempt by capital to extinguish the commons created by file-sharers has potentially served to deepen the antagonism, driving further peer-to-peer innovation. This only makes the paradox of commoning more difficult for the music industry to resolve. Having failed to stem the tide of file-sharing, there is no guarantee the music

industry can now bring the practice of file-sharing back into the logic of accumulation. And even if it does succeed, the outcome will have been an imposition rather than a choice.

Chapter 8 Conclusion

This dissertation has attempted to identify and explain the competing conceptualizations of the social relations implicated in the conflict over peer-to-peer file-sharing. These social relations have been constructed to facilitate either the *commodification* or the *commoning* of informational and cultural artifacts. Until this study, peer-to-peer file-sharing has been analyzed primarily through the lens of commodification. Because of this, scholars tend to see the practice of file-sharing as some sort of aberration—an unwanted and unforeseen byproduct of the otherwise orderly development of technology. Mainstream portrayals of file-sharing have adopted a criminality framing to explain these activities. Many politicians and industry representatives see file-sharers as pirates or thieves engaged in an unscrupulous enterprise to get something for nothing at the cost of denying an income to the producers of informational and cultural goods. Relying on specious comparisons to theft in rival goods and lost sales, they see in file-sharing evidence of the perverse qualities of digitization that imperil “conventional” market dynamics. Alternately, scholars from the copyright reformist tradition have largely framed file-sharing as a manifestation of missing markets. According to this perspective, file-sharing appears as a market imperfection resulting from the content industries’ failure to produce a market adequate to the current technological milieu. Yet the reformist agenda of these scholars and their overriding concern with rescuing capitalism from its own crises has resulted in an avoidance of serious scholarship on the topic of file-sharing. This explains why participatory culture is celebrated by scholars like Lessig (2004) and Benkler (2006) who

simultaneously distance themselves from or denigrate the practice of file-sharing as theft. And finally political economists working from an orthodox Marxist perspective have been hindered by two problematic tendencies. First, having long failed to acknowledge the productive role which information plays in the process of accumulation, there is a preoccupation with the ideological content of informational and cultural goods. And second, to the degree that political economists have now extended their gaze to the infiltration of informational and cultural goods into the domestic sphere, the assumed capitalist domination over labor in the factory is now seen to encompass the whole of society. From this perspective the practice of file-sharing is inevitably co-opted and of little threat or concern to the capitalist logic of accumulation.

While all these perspectives may shed light on the process of commodification, they do so at the expense of normalizing the market form and obscuring the defiant and creative character of peer-to-peer systems. Despite the mainstream and reformist characterizations of peer-to-peer file-sharing as theft, it is not an antisocial behavior—it is a richly social and innovative system for the allocation of informational and cultural goods among large numbers of people. Nor is it simply an aberration of the market playing catch-up with the fast pace of technological development—the market is not the only or best choice for the production and distribution of informational and cultural goods. In these final pages of the dissertation the significance of the findings of this study are summarized and contextualized. First the theoretical approach taken as a part of this research project is addressed, with an explanation of why a combination of structuration theory and Autonomist Marxism was utilized to explain the conflict over peer-to-peer

file-sharing. This summary describes how the practice of file-sharing is an articulation of the larger social dynamic of immaterial labor. The relationship between commodification and commoning is also further explained. In addition, the concept of class and how it relates to both the social systems of commodification and commoning is addressed. This is followed by a review of the history of the conflicts over peer-to-peer models with an eye to explaining the centrality of class antagonism to these conflicts. Attention is given to the ways in which intellectual property law has functioned to facilitate market stability at the expense of foreclosing the radical potential of technologies with respect to the production and distribution of informational and cultural commodities. This historical analysis is then extended to the current conflict over file-sharing as the structural dimensions of the RIAA litigation campaign and its offspring are reviewed. These legal conflicts were largely restricted to issues of the appropriate and inappropriate usage of communication infrastructure and court resources. In order to address the issue of appropriate and inappropriate uses of informational and cultural goods the discussion then turns to the analysis of the practice of file-sharing itself. The findings of the survey of BitTorrent users are reviewed with particular emphasis given to the topics of class constitution and the role of the gift economy within file-sharing communities. The conclusion ends with a review of the significant contributions of this research project as well as a discussion of its limitations and prospects for future research.

In order to establish a new perspective of file-sharing this study asked: *what competing conceptualizations of social relations motivate conflicts over peer-to-peer file-sharing?* In answering this question this study utilized a combination of theoretical

approaches with the goal of mapping the structures by which the practices of individual file-sharers are coordinated into translocal relations. Anthony Giddens's (1986) structuration theory was used to conceptualize both the practice of law and file-sharing as recursive in nature. Structuration theory provided a framework to explore structure along the dimensions of signification, domination, and legitimation. Moreover, this theory allowed me to analyze commodification and commoning as two separate social systems each with its own set of relatively bounded social practices. Autonomist Marxism was used primarily to explore the interaction between these two systems and to explain the trajectory of capitalist development in the sphere of information production and distribution as being conditioned by class antagonism. With regard to the production and distribution of music, the social system of commodification has worked to mitigate competition among firms, resulting in a small number of wealthy renters and suboptimal outcomes in the production and distribution of music goods. The copyright litigation campaigns targeting individual file-sharers represent an attempt by the content industries to preserve these monopolistic conditions. As one 22 year old student from the United States put it in the survey:

These lawsuits are a tragedy of the commons. The interests of the few are outweighing the many.

Peer-to-peer file-sharing, as an alternative social system which breaks with commodity exchange, is capable of achieving more desirable results for a greater number of people through the commoning of resources. In this sense file-sharing also represents something which transcends class antagonism. This is why structuration theory was integral to this

study and not just a mere adjunct to Marxian theory. Structuration theory provided a language to analyze the creativity and innovation of file-sharing communities as something more than resistance. Structuration theory also afforded a means to analyze structural impediments to the litigation campaigns which were not immediately related to class struggle (for example the hostility of judges to these campaigns).

Although the initial inspiration for this study stemmed from the significance and novelty of the RIAA's mass litigation campaign, it was immediately apparent that the structures which condition file-sharing are not confined to the courtroom. Therefore, this research includes analyses of both the litigation and the actual practice of file-sharing as well as the points of intersection between the two. With respect to file-sharing litigation this study found that the conflict centered primarily on two issues. The initial challenges to the RIAA litigation involved the legitimate and illegitimate uses of communications infrastructure. ISPs sought to evade liability for the actions of file-sharers while simultaneously avoiding having to release customer information which they feared might upset their customer base. In addition, the issue of legitimate and illegitimate uses of court resources figured prominently as jurists expressed concern about the burden placed on federal dockets as well as the tremendous disadvantage and liability endured by defendants in these cases. With respect to the structural analysis of file-sharing, this study analyzed the practice both in terms of its relation to commodification and as an autonomous social arrangement among individuals seeking to establish new terms for access to informational and cultural goods. File-sharing was contextualized in relation to the political economy of information production and distribution in general and the music

industry in particular. File-sharing was presented as one in a long line of conflicts over peer-to-peer distribution models. This history was traced from the inception of early peer-based Internet models of communication to the rise of the client/server model in the 1990s to the resurgence of peer-to-peer among contemporary file-sharing communities.

Lazzarato (1996) defined immaterial labor as that labor which produces the informational and cultural content of commodities. Hardt and Negri (2006) have argued that immaterial labor entails new forms of autonomous cooperative social arrangements among people. These new social relations are facilitated by recent technological developments which allow for the production and maintenance of commons of informational and cultural artifacts in networked environments. Firms in the information sector rely on social arrangements in which generalized human interaction produces the cultural knowledge, language, code, and information necessary to sustain accumulation. That is to say, we have reached a stage in the development of the *productive forces*⁸⁹ wherein a particular contradictory movement has emerged. Immaterial labor signals a separation of labor from explicit capitalist control as the production of surplus value becomes generalized throughout society. Capitalists are left to glean value from these cooperative social arrangements. But this process is contingent, as Hardt and Negri (2006) assert that immaterial labor simultaneously invests labor with a means of exodus from capital and normal commodity structures. The commons make exodus possible. And any subtraction from the coercive class relation threatens the continuity of commodity exchange. As a result, where firms are unsuccessful in their attempts to glean value from autonomous cooperative social arrangements they are compelled to eliminate

⁸⁹*Productive forces* are defined as the synthesis of labor and the means of production.

the avenues for exodus. I have argued in this dissertation that peer-to-peer file-sharing is an articulation of this larger development in social relations as immaterial labor takes on greater significance in the economy as a whole.

The relationship between the social system of commodification and the social system of commoning is of particular concern to this study. Giddens (1986) cautioned that social systems rarely have easily specifiable boundaries. Yet structure, when regarded as the rules as resources which recursively reproduce social relations, may have institutionalized features which are relatively stable across time and space. In this sense two social systems can be distinguished by sets of relatively bounded social practices. And while the social systems of commodification and commoning are in some sense contradictory, there is still considerable overlap between them. That is to say, the practice of commoning does not necessarily preclude that of commodification. The free labor of producing and maintaining pools of information in various online wikis, the work which goes into the open source software movement, even the interactions among youth belonging to various subcultures or groups—all can be mined by capitalists seeking to glean value from commons produced by autonomous social cooperation. Of the contradictory relationship between the two systems, one can say that the practice of commoning represents a crisis for commodification, a potential for rupture in the social relations of commodity exchange because the social relations of commoning demonstrate the potential for an alternative ordering of society. With respect to the file-sharers discussed as a part of this study, there exists a range of discursive meaning attached to the practice of file-sharing. In other words, as file-sharers engage in the process of

commoning they continually make meaning out of their activities. Most of the file-sharers represented in this research did not speak explicitly of commoning as a means of exodus from the system of commodity exchange, although they alluded to the injustices of a system that cheats artists, is overpriced, and inhibits their ability to access hard-to-locate or commercially unavailable materials. Even so, this does not invalidate the theory of exodus or the contradiction and larger crisis represented by immaterial labor. The resistance of file-sharers, no matter how it is framed, has at its root the antagonism of the capitalist class relation. And though the struggle is not organized in the previous fashion of traditional labor struggles this is because the production of surplus value in informational and cultural goods has been generalized throughout society.

In this context the file-sharer does not appear as a radicalized worker; rather, the worker surrogate, the user or participant, generally operates in a context which is unique from many forms of previous class struggles. Therefore, this dissertation put a great deal of emphasis on the constitution of class in the context of file-sharing. Marx (1978d) argued that class signified a group of individuals sharing common relations to both labor and the means of production. More specifically, he argued that under the capitalist mode of production the working class was alienated from not only its own labor power but the instruments of production as well. In fact, this alienation serves as the foundation of capitalist society:

The existence of a class which possesses nothing but its capacity to labour is a necessary prerequisite of capital. It is only the domination of accumulated, past,

materialised labour over direct, living labour that turns accumulated labour into capital. (208-209)

Moreover, Marx asserted that the worker is trapped in this social relation with capital because his “sole source of livelihood is the sale of his labour power” and to leave this class relation is to “[renounce] his existence” (p. 205).

Marx (1991) acknowledged that class distinctions were not always perfectly defined. However, he asserted that there was a consistent effort to alienate workers from the instruments of production. Consider the following quote from his unfinished chapter on *class*:

We have seen how it is the constant tendency and law of development of the capitalist mode of production to divorce the means of production ever more from labour and to concentrate the fragmented means of production more and more into large groups, i.e. to transform labour into wage-labour and the means of production into capital. (1025)

What distinguishes the conflict over file-sharing from the economic landscape of Marx’s time is not the disappearance of class. It is as central to the conflict today as it was in the second half of the 19th century. The distinguishing feature of the current technological milieu is the ascendancy of immaterial labor in the processes of production. Although the generation of surplus value has been generalized throughout society as Tronti (1971) has argued, the attempt to constitute people—in this case file-sharers—as a class is still as apparent as it ever was—as is the resistance to that coercive exercise of power. Marx

(1978) argued that the working class seeks to transcend this exercise of power by annihilating the class distinction itself:

The proletariat, on the other hand, is compelled to abolish itself and thereby its conditioning opposite—private property—which makes it a proletariat. (133)

Marx argued that the working class seeks to destroy the class antagonism altogether:

Within the antagonism as a whole, therefore, private property represents the *conservative* side and the proletariat the *destructive* side. From the former comes action aimed at preserving the antagonism; from the latter, action aimed at its destruction. (134)

The conflict over peer-to-peer file-sharing embodies all of the dynamics laid out so long ago by Marx. The ascendancy of immaterial labor has ruptured the ability of capitalists to effectively alienate people from either their own labor or the instruments of production. File-sharers quite possibly represent the most brazen attempt yet to annihilate the class distinction through a steady undermining of property rights in informational and cultural goods. For the reasons given by respondents in this study—financial pressure, a desire for better terms of access, an ethos of sharing—file-sharers have created a commons better-suited to their informational and cultural needs. In such a state they exist as a multiplicity of diverse singularities engaged in the creation and maintenance of a set of social relations autonomous of the wage relation. File-sharers are only re-constituted as a class when the content industries seek to force them back into the social system of commodification through the application of force. Absent this coercion, file-sharers

appear as a multitude of communities constructed around an endless variety of genres and tastes.

As I have stated throughout this study, the working class is a class which seeks its own annihilation. File-sharers are an innumerable collection of singularities until constituted as a class for exploitation by capitalists. It would be an error to dispense with the concept of class as it would lead us to miss many of the important dynamics which determine the trajectory of capitalist development in information production and distribution. In fact, this study of file-sharing demonstrates that the relationship between the social systems of commodification and commoning is defined by class antagonism. The potential for file-sharers to constitute themselves outside of the class relation has been met with retaliation. For example, in the courts the content industries have sought to re-constitute file-sharers as a class through the process of joinder. Yet even this action demonstrates the contingency of the capitalist attempts to constitute these individuals as a class. Unforeseen structural impediments—namely a concern about the potential abuse of court resources—largely derailed the industries’ attempts to constitute file-sharers as a class. Joinder was denied in a number of cases because of the tremendous burden it might place on the courts. The result was a radical increase in the associated filing fees for plaintiffs. Extremely high statutory awards were rejected in both the Tenenbaum and Thomas-Rasset cases on both constitutional and common law grounds. And the award of attorney’s fees to defendants dramatically raised the financial liability for plaintiffs seeking to file cases against alleged file-sharers. Other unforeseen structural impediments emerged outside of the courtrooms as file-sharers continually developed the practice of

file-sharing to better protect themselves from potential lawsuits. These developments all can be seen as part of a larger social dynamic of potential rupture in the sphere of information production and distribution that has been playing out for many years now.

The history of the conflict over peer-to-peer communication predates the recent skirmishes over contemporary file-sharing applications. Generally speaking, the economic landscape of media firms has been marked by trends in growth, integration, globalization, and concentration of ownership since the 1980s. These trends have resulted in oligopolistic conditions in many media markets. These dynamics are themselves the result of an economic rationale in which market stability is pursued through obtaining greater market share. This study has argued that this is representative of an exodus on the part of firms from the coercive laws of competition. Such is the norm of the current period of monopoly capitalism. Raising barriers to market entry and lowering transaction costs allows firms to systematize the allocation of resources free from the strictures of competition. Internally integrated systems arise for the management of information production and distribution, placing larger media firms at a tremendous advantage relative to smaller competitors. Competition becomes little more than a rhetorical device used to further the political ends of a neoliberal agenda. With regard to the music business, record companies are currently characterized by vertical supply chains in which publishing, recording, manufacturing, and distribution are all housed under the same roof. The result is a multi-billion dollar industry headed up by just four firms which are themselves the properties of immense transnational media conglomerates.

The relation between copyright law and the music industry is of special significance to this study. Intellectual property provisions are the glue which holds the integrated supply chains together. As is the case for many media industries, the music industry has been characterized by high levels of economic concentration and integration as well as an unmistakable reliance on intellectual property regimes. This dissertation has illustrated how industrial change consistently shaped, and was shaped by, intellectual property opportunities and control. Beginning in the late 19th century with the technological developments of Berliner and Edison, the recording industry was from the outset an oligopoly in which three firms⁹⁰ enjoyed a patent monopoly until 1917. The Copyright Act of 1909 established rights in mechanical reproductions (though not recorded music) and created a statutory limit to the royalties paid by recording companies to music publishers. The compromise between these two groups allowed the music industry to flourish by the end of the 1920s. Around the same period broadcasters emerged as a significant economic player. With the help of the 1909 establishment of rights in mechanical reproduction, broadcasting functioned as a lifeline to keep music publishers afloat through the economic downturn of the 1930s. However, lacking copyright protections and an equivalent revenue stream, the recording industry went through significant industrial restructuring during this same period. Only with the post-World War II economic boom and the birth of rock and roll in the 1950s did recording companies eventually displace music publishers as the key player in the music industry. It was at this time that the RIAA emerged to facilitate technological standardization within the recording industry. Soon thereafter, the RIAA looked to copyright as a means to

⁹⁰ These three firms were Edison, Victor, and Columbia.

combat piracy in music recordings. Copyrights in recorded music were recognized in 1972 and the compact disc was introduced in 1982. As sales of recorded music peaked in the 1990s, the music industry was dominated by the Big Five record companies which became the Big Four in 2004.⁹¹

Over the course of the 20th century, the music industry was characterized by increasing growth, integration, globalization, and concentration in ownership—all made possible by a copyright regime tailored to produce market stability while avoiding the worst effects of unbridled market competition. But the story of capitalist development in the production of music is not solely a tale of competition among firms. High levels of integration also created opportunities for crisis. Each stage in the production and distribution chain was dependent on the proper function of every other stage. Should the music industry lose control of any point the entire chain was threatened. This is precisely why the emergence of contemporary peer-to-peer systems is significant to the trajectory of capitalist development in the sphere of information production and distribution.

As previously mentioned, the tendency toward disintermediation or exodus from capital preceded contemporary file-sharing platforms which are themselves grounded in a long history of peer-based communication systems. The practice of commoning in recorded music extends back at least as far as the 1940s when amateur jazz and opera aficionados became the unofficial stewards of cultural artifacts neglected by the record labels of the day. But file-sharing also has its roots in the moral economies of early hacker communities. Perhaps extending all the way back to the radio amateurs of the

⁹¹ The Big Five were Time Warner, Sony, Bertelsmann, EMI, and Universal. Further concentration in ownership resulted in just four when Sony purchased Bertelsmann in 2004.

1900s, belief systems premised on *sharing* and *open access* as the keys to scientific and technological progress brought hacker groups into recurring conflicts with media industries. The development of Internet peer-based systems is one in a long line of conflicts. The enhanced autonomy offered by recent technological developments allows people to do more for themselves and in loose coordination with others. The Internet started largely as a peer-based system for the sharing of resources among researchers. Though the emergence of the World Wide Web in the 1990s signaled the growing prevalence of the client/server model of information distribution, peer-based systems have never been effectively displaced. FTP sites and BBS systems persisted while new peer-to-peer networks like Napster, as well as successor systems such as BitTorrent, were introduced to enormous success.

The popularity of Napster and its progeny derived from the relatively decentralized character of the associated search, storage, and communication operations. The particular development of these peer-based technologies was fueled in part by escalating legal conflicts with the content industries. Early on these legal conflicts centered on the issue of the legitimate and illegitimate use of communication systems. The record industry was aided by a host of legislation passed before the legal battles with file-sharing systems commenced. This legislation included the No Electronic Theft Act of 1997 which allowed for the criminal prosecution of copyright infringement even in cases where there was no commercial benefit to the defendant(s) and the Digital Theft Deterrence and Copyright Damages Improvement Act of 1999 which dramatically increased the allowable statutory damages in cases of copyright infringement. Laws such

as these were clearly driven by concerns about the implications of recent technological developments in both digital file formats and Internet communication. For example, *A&M Records, Inc. v. Napster, Inc.* in 2001 turned on the issue of legitimate and illegitimate uses of communication systems. Napster's brokered communication and centralized search database proved a relatively easy legal target for the major record labels. Plaintiffs in the case against Napster alleged contributory and vicarious infringement under the DMCA, and the Court of Appeals for the Ninth Circuit was receptive to their arguments. Because the court simply affirmed a preliminary injunction ordered by the lower court, Napster's arguments concerning fair use and substantial noninfringing use were never decided. In fact, the issue of fair use would not play an important role in any file-sharing case. The rights of copyright holders have been consistently treated as inviolate by the courts in peer-to-peer cases. In this sense the issue of legitimate and illegitimate uses of cultural and informational goods in the context of file-sharing has not been deemed worthy of the courts' consideration. The courts thus far have functioned to strengthen the legitimation and signification of private property rights in informational and cultural goods.

Subsequent generations of file-sharing platforms responded to the Napster ruling with increasing decentralization of the associated search, storage, and communication operations. With each iteration these second generation file-sharing platforms attempted to make themselves increasingly difficult to target in court while still providing the structures necessary for a viable system of commoning. Gnutella, which emerged in 2000 as an open source project developed under a General Public License, was a networking

protocol for a distributed search. In theory, Gnutella was a purely decentralized peer-to-peer system. However, freeriding and the resulting decision to adopt a two-tier overlay approach meant that, in practice, Gnutella was not a purely decentralized system. In 2001 the FastTrack protocol was introduced and adopted by clients like Grokster, iMesh, Kazaa, and Morpheus. Unlike Gnutella, FastTrack was not developed as an open source project, but like Gnutella, it adopted a centralized/decentralized topology of supernodes to improve the scalability of the system. FastTrack suffered from significant amounts of freeriding and was plagued by weak hashing algorithms which allowed the content industries to sabotage the network by introducing corrupted content. In 2001 the RIAA sued FastTrack clients Kazaa, Grokster, and MusicCity for alleged copyright infringement. Both the district and appellate courts found in favor of the defendants based on the Betamax defense of substantial noninfringing use. At issue was the legitimate and illegitimate use of communication systems (though again the industry's hold over cultural and informational goods was not directly challenged in the courtroom). However, the content industries were temporarily buoyed when the RIAA appealed the case to the Supreme Court which held that the defendants were liable for inducing copyright infringement despite the presence of substantial noninfringing uses. Other peer-to-peer companies like Aimster, AudioGalaxy, Scour, and Limewire also found themselves caught up in file-sharing litigation around this same time. Although the content industries scored a number of important legal victories against the purveyors of file-sharing applications, it was not enough to stem the tide of file-sharing. Eventually, this led to the

RIAA's fateful decision to begin targeting individual file-sharers in addition to ISPs, entrepreneurs, and software developers.

The RIAA litigation campaign began in 2003 when the RIAA served Verizon with an initial subpoena in an effort to identify the account holders associated with the IP addresses it had turned up during its investigations. Although Verizon successfully resisted the subpoenas in the long run, the lower court compelled the ISP to hand over its customer information, which the RIAA immediately used to begin targeting individuals in court for alleged copyright infringement. The thousands of subsequent cases which flooded the district courts resulted in very bad press coverage and Congressional criticism of the RIAA at the outset of the campaign. At issue were the legitimate and illegitimate uses of court resources. Many critics were concerned that defendants only received notice from their ISPs well after legal action had been initiated against them. The courts' jurisdiction was also called into question by both the ISPs and the judges in these cases. The RIAA responded by adopting a slight modification to their tactics in which they gave defendants advance notification of impending legal action. Nevertheless, the suits during the 2003-2007 period resulted primarily in default judgments, summary judgments, and settlements in the RIAA's favor. In 2007 the RIAA began a deterrence and education initiative in which it began targeting alleged file-sharers on university and college campuses across the nation. As part of the initiative the RIAA asked universities and colleges to forward pre-notification letters to their students. The response of universities to the RIAA's request varied but a number of schools and students fought back. Even in those cases where the schools did not openly resist the RIAA considerable legal resources

were often mobilized on behalf of targeted students in order to help them avoid more costly judgments against them.

Despite the tens of thousands of cases decided or settled in the RIAA's favor, a small number of important cases in which defendants decided to fight back helped to limit the effectiveness of the RIAA's campaign. Ultimately, a series of decisions turning on issues of the legitimate and illegitimate uses of court resources worked against the RIAA's efforts. For example, the RIAA's *investigatory practices* were challenged in a number of cases. In fact, the RIAA eventually ditched its investigatory arm MediaSentry in the wake of these decisions. The issue of *making available* was also raised in a number of cases and persistently threatened to pull the rug out from under the RIAA litigation campaign. Perhaps more significantly, the issue of *attorney's fees* was decided in favor of the defendants in the Santangelo, Andersen and Foster cases. These cases dramatically increased the financial burden of the RIAA litigation campaign and when combined with the drawn out and expensive Tenenbaum and Thomas-Rasset cases, may have helped bring the campaign to an end in 2008. The Tenenbaum and Thomas-Rasset cases are ongoing as of this writing and the judges in each case have drawn into question the ability of plaintiffs to secure extraordinarily high *statutory damages* against alleged file-sharers. Again, in all of these instances the decisions have turned on the legitimate and illegitimate uses of court resources—not on the issue of the legitimate and illegitimate uses of informational and cultural goods.

Possibly the most significant impact of the RIAA campaign has been its use as a model by other content producers for further litigation against alleged BitTorrent users.

In 2010 tens of thousands of cases were filed against individuals for alleged copyright infringement—more than were ever sued during the RIAA litigation campaign. Organizations such as the US Copyright Group, Adult Copyright Company, Media Copyright Group, and Copyright Defense Agency have sprung up in the United States to represent an assortment of independent movie studios and pornographers. These groups built on the RIAA model of file-sharing litigation as they attempted to *profit from piracy*, hoping to secure millions of dollars from individuals in out-of-court settlements. Thus far their plans have been met with resistance in a fashion similar to the resistance to the RIAA campaign. Judges in a number of these cases have refused to allow plaintiffs joinder, dealing a major blow to the future of such legal actions by dramatically raising the filing fees for mass copyright cases. In all of these cases, whether as part of the original RIAA litigation campaign or subsequent efforts, the resistance in the legal arena is narrowly confined to questions of the proper uses of communication systems and court resources. Resistance in the legal arena centers primarily on the rights of the owners of communications infrastructure or the perceived abuse of the legal process by the content industries. Both judges and ISPs have chafed under the demands of content producers who they feel have overreached in their quest to target individual file-sharers. As individuals have been targeted by these groups, attorneys and judges have worked to ensure that defendants have adequate legal resources with which to defend themselves. That being said, nowhere in any of these cases is the actual practice of file-sharing defended, only the hapless individuals caught up in mass copyright lawsuits.

The issue of the legitimate and illegitimate use of informational and cultural goods only emerges once the investigation turns to the social system of commoning in general and the practice of file-sharing in particular. This study confronts file-sharing as a set of social relations premised on the commoning of resources through peer-to-peer systems. While these practices are in some sense inconsistent with the processes of commodification, the social system of commoning does not exist somewhere outside of the capitalist system. Peer-to-peer systems are an outgrowth of a contradictory dynamic within a capitalist logic of accumulation increasingly dependent on immaterial labor. Nevertheless, the social practices which constitute file-sharing are relatively bounded across time and space. By surveying 363 file-sharers from 42 countries and a variety of backgrounds this study begins to map the structures which undergird these social relations of commoning. There are many communities within the general population of file-sharers, each with its own distinct set of interests, rules and practices. These various file-sharing communities rely on commonly available web resources, general tracker and index sites, private tracker and index sites, dedicated peer-to-peer forums, and a variety of anonymity resources for social cohesion in a hostile legal and technological environment. The tradition of free and decentralized access to cultural goods—the so-called gift economy—unites them all. These individuals are motivated to share artifacts in peer-to-peer environments primarily because it affords them greater access to their culture on terms more favorable than those offered by commodity exchange. Whether it is lower prices, format-shifting, on-demand playback, higher quality file formats, or hard-to-find content, the social system of commoning simply affords file-sharers access to

quality goods more efficiently than does the social system of commodification. The motivation for better access constitutes one of the key structural features of file-sharing systems as individuals vie for control over resources.

The class antagonism produced by the contest for the surplus of social production has long been a general structural feature of capitalist society. The same is true of file-sharing systems wherein the continued legal attacks by the RIAA and other copyright groups have engendered considerable resentment within file-sharing communities. Most of the file-sharers contacted as a part of this study downplayed the potential of litigation to diminish overall levels of file-sharing activity. They also emphasized the antagonism created by file-sharing litigation. The political economic awareness of the file-sharers contacted as a part of this study is considerable. When asked about whether the RIAA or record labels are concerned about the welfare of either music fans or musicians the general response was “no” except where the interests of musicians overlapped with the financial interests of the major labels. In fact, the file-sharers represented in this study were very careful to align their interests with those of musicians whom they wish to support. The antagonism demonstrated in this study is reserved solely for the record labels, the RIAA, and other large media firms. These groups are perceived as little more than surplus eaters, devouring the value produced by the interactions among musicians and fans of music. To the extent that the industry is not capable or satisfied to glean value from the file-sharing commons they have decided to attack the commons directly. Yet respondents also pointed to the increasing sophistication of peer-to-peer systems as a result of the need to stay one step ahead of the legal efforts of the copyright industries.

The file-sharers in this study see copyright law largely as a tool of the copyright industries and echo many of the concerns of critical legal scholars about the loss of balance in copyright law. The fact that file-sharers as a class of people have not found legal representation in the courts as a part of any litigation targeting individual file-sharers is significant to the structural ordering of file-sharing communities. But rather than a detriment to the structural cohesion of these communities, one might say that the lack of representation and the perceived injustice of these campaigns has only further deepened and strengthened the structures of file-sharing. Injustice is a resource which drives peer-to-peer innovation both technologically and socially.

The major contributions of this dissertation can be summarized as follows. First, unlike past research this dissertation confronts file-sharing as something other than criminal activity or a market aberration. Instead, file-sharing is theorized as the constitution of a set of social relations alternative to those premised on commodity exchange. The conflict over file-sharing is explained largely as the product of class antagonism as the content industries seek to re-constitute file-sharers as a consuming class. Accordingly, there are two possible courses of action for capitalists. The first is to extinguish the commons created by file-sharers and to eliminate the avenues of exodus from the class relation. This course of action is embodied by the mass copyright litigation campaigns detailed extensively in this study. This study asserts that these efforts were, in large part, stymied by unforeseen structural impediments as a general concern over the potential abuse of the legal process derailed much of the litigation. However, the litigation campaigns also generated structural developments outside of the legal arena.

Resistance and hostility directed at the content industries has served as a resource for file-sharing communities. As a 20 year old student from the United States commented:

It's the opposition from the RIAA and MPAA, along with their government minions, that solidify us. Not only is P2P inherently communal, but we have an us-against-them feeling.

In this sense the constitution of file-sharers as a class can work against the coercive exercise of power as much as it may contribute to the division of labor. File-sharers when constituted as a class represent a dangerous enemy to capitalists—especially when one considers that the instruments of production are not under the exclusive control of capitalists. Class antagonism drives the technological development of peer-to-peer systems as file-sharers go deeper while strengthening the structures which provide them social cohesion.

The second course of action for firms is to woo file-sharers back into social relations premised on commodity exchange by providing better terms of access to informational and cultural goods. This is the familiar call by reformists and technologists for media firms to adopt innovative business models respecting the new digital logic. But this accommodation is not done by the good nature or forward-thinking of capitalists. Rather it is the product of class struggle. It is an accommodation to the file-sharers—not the digital commodity. As a 32 year old file-sharer from Finland stated:

Y'know, Spotify has eliminated 95% of my music downloading: I am happy to pay 10 euros a month for the convenience! The rest of my downloading will

disappear the very moment the "Spotify of video" ...emerges. Documentaries, porn, indie films, foreign films, TV-series-the-moment-they-come-out...and all totally void of commercials. Y'know, the stuff a pirate is used to! :) I am sure that [this] time will come, it is just a matter of... time. But this is only BECAUSE of piracy: such convenient services have been based on p2p tech and erected to fight piracy... so there is no question in my mind about piracy being not illegal as such—it is necessary trailblazing in order to balance the situation so that everyone benefits: the artists, the producers AND the consumer.

This is exactly why it is so critical to include class antagonism in the analysis of capitalist development. It is exactly where the political economists have gotten it wrong. Should a new business model become ascendant and file-sharing activity recede, it is evidence of successful class struggle. It is capitulation in the face of overwhelming resistance to unacceptable terms of access. This type of class struggle is a structural component of all capitalist development.

While this dissertation makes a number of contributions with respect to theorizing class antagonism and resistance as part of the conflict over peer-to-peer file-sharing, there is another dimension to file-sharing introduced as part of this research. That is to say, there is an aspect of file-sharing which transcends the class relation. Recall that Foucault (1982) asserted power was only exercised over free subjects. In this light, this dissertation began a cursory investigation of those structures implicated in file-sharing which are something other than a simple reaction to the alienation necessary for capitalist accumulation. This is what Barbrook (2000; 2003) refers to as the *gift economy*—an

ethos of sharing which provides a structural order to file-sharing independent of class antagonism. Consider the comments of a 22 year old file-sharer from the United States:

There are small communities. They are usually evident by forums and common users on specific sites. Usually what holds the community together is the desire to share. There are definitely those who want to grab a file and leave, however, an active community makes sure that there are no viruses, provide support for getting files to work if it has the wrong file extension, and generally work to do the best they can to keep the community friendly. Despite common beliefs, people online are about as good as they are on the streets. They'll help each other and make friends, friends we may never see, but still seem to stay friends despite an ocean of separation.

This dissertation only scratches the surface of these structural dimensions to file-sharing. It is a phenomenon that requires an analytical approach which goes beyond the common Marxist formulations of class and class antagonism. It is why this study incorporates structuration theory into the approach.

Future research needs to examine these social dimensions of file-sharing in much greater detail. As already stated, this study only begins to map the surface of a highly social yet elusive and complex set of practices. It is my hope that this study will serve as the foundation for future research in this area. In particular, I plan to build on the results of the survey featured in Chapter 7 to create a more standardized questionnaire. As the generalizability of this study was limited by both the questionnaire design and the sample

of file-sharers, I expect to engage with file-sharing communities again in the future in an attempt to discern the extent to which file-sharers activate the various structures identified by this study. Moreover, this research must be extended to file-sharing practices at the margins of peer-to-peer systems. The current study dealt primarily with BitTorrent users while largely ignoring the numerous and varied file-sharing practices which lie outside of the BitTorrent universe. The intersection of file-sharing activities with global social, cultural, legal and economic structures must also be analyzed. The analysis of all these structural dimensions and the many diverse file-sharing communities will be critical to understanding file-sharers when constituted as something other than a class. This type of analysis is also vital to understanding the trajectory of capitalist development and the decision of the content industries to either co-opt the free labor of file-sharers or to eradicate their avenues for exodus. Resistance in common among file-sharers is an obvious mover of peer-to-peer innovation in both technological and social terms. Should the social relations of commodification be made palatable enough to win over a substantial portion of the population of file-sharers, the dynamic of struggle in this arena will change. Either way, the trajectory of capitalist development in the production and distribution of informational and cultural goods will have been conditioned by the activities of file-sharers in resistance to and in spite of social relations premised on commodity exchange.

Appendices

APPENDIX A: INFORMANTS FOR SEMI-STRUCTURED INTERVIEWS

INDIVIDUALS	SIGNIFICANCE
Ray Beckerman	Beckerman maintains important blog detailing the RIAA litigation campaign and is a member of the EFF. He is also the lead attorney in <i>UMG v. Lindor</i> , <i>Elektra v. Santangelo</i> , among others.
Charles Nesson	Nesson is a member of the Berkman Center for Internet and Society at Harvard University and is currently guiding a team of Harvard law students who are providing legal defense for a 25-year old graduate student at Boston University in <i>Sony BMG Music Entertainment et al v. Tenenbaum</i> .
John G. Browning	Browning is a graduate of the University of Texas Law School and a member of the Dallas office of Gordon & Rees where he represents defendants in civil cases with the RIAA.
Camara and Sibley	Houston law firm representing Jammie Thomas-Rasset
Representative Howard Berman	Berman is Chairman of the House Committee on Foreign Affairs and oversaw a congressional hearing on piracy after the Fox film “Wolverine” was leaked to the Internet before the film’s release.
Representative Lamar Smith	Smith is a member of the House Committee on Science and Technology and is an outspoken advocate for expanding the DMCA’s restrictions on technological bypass of copyright protections.
John Malcolm	Malcolm is the director of MPAA’s worldwide anti-piracy campaign and is involved in the MPAA’s “outreach” programs to universities and ISPs to help them address piracy issues.
Keith Bolcar	Bolcar is a special agent in charge of FBI’s cyber division in Los Angeles which meets regularly with studio executives to share intelligence and discuss security issues.
Department of Justice Representative as-of-yet to be determined	From the Intellectual Property Division—attorneys charged with defending the United States from alleged intellectual property violations and possibly prosecuting criminal cases of alleged copyright infringement.
Kerry Gonzales	Pleaded guilty to felony copyright infringement for disseminating an unauthorized copy of “The Hulk” in 2003.

Marc D. Hoaglin	Charged with felony copyright infringement under the Family Entertainment Copyright Act for uploading an unauthorized copy of Star Wars Episode III Revenge of the Sith one day before the film's release.
Tanya Andersen	She is the defendant in <i>Atlantic v. Andersen</i> .
Christopher Brennan	He is the defendant in <i>Atlantic v. Brennan</i> .
Patricia Santangelo	She is the defendant in <i>Elektra v. Santangelo</i> .
Rhonda Crain	She is the defendant in <i>Sony v. Crain</i> .
Joel Tenenbaum	He is the defendant in <i>Sony BMG Music Entertainment v. Tenenbaum</i> .
Jammie Thomas-Rasset	Minnesota mother ordered to pay nearly \$2 million for sharing 24 songs on Kazaa in <i>Capital v. Thomas</i> .

APPENDIX B: CASE LAW AND STATUTES

CASE	SIGNIFICANCE
ELEKTRA ENTERTAINMENT v. SANTANGELO (White Plains, NY, 2005)	This was the first time the RIAA’s “making available” theory was challenged. The judge dismissed the case with prejudice, leaving the door open for Santangelo to recover attorney’s fees. The RIAA then filed a separate case against Santangelo’s children.
ELEKTRA ENTERTAINMENT v. BARKER (New York, NY, 2008)	“Making available” was rejected in this case. There are a number of important briefs filed by the Electronic Frontier Foundation, the Computer & Communications Industry Association and U.S. Internet Industry Association, and the Department of Justice.
CAPITOL RECORDS v. THOMAS (Duluth, MN, 2009)	This is the only RIAA case to go to a jury. RIAA was awarded \$222,000 based on sharing 24 songs, but verdict was set aside by the judge for “manifest error of law” because of RIAA’s proposed jury instructions which advised that merely “making available” constituted copyright infringement. The judge also questioned the excessiveness of the statutory damages against an “individual” since all cited cases involved commercial entities. Retrial award was even more significant and the case received a significant amount of media attention. Amicus briefs filed by Progress and Freedom Association, MPAA, 10 copyright law professors, Intellectual Property Institute of William Mitchell College of Law, Electronic Frontier Foundation, Computer & Communications Industry Association and U.S. Internet Industry Association.
ATLANTIC RECORDING v. HOWELL (Phoenix, AZ, 2008)	This case involved the examination of the defendant’s hard drive. Amicus Curiae filed by Electronic Frontier Foundation.

CAPITOL RECORDS v. FOSTER (Oklahoma, 2007)	Amicus briefs filed by Electronic Frontier Foundation, American Civil Liberties Union, Public Citizen, and AALL. The case was dismissed with prejudice leaving the door open for Debbie Foster to recover attorney's fees. The judge also ruled that plaintiffs failed to prove contributory or secondary infringement.
SONY v. CRAIN (Beaumont, TX, 2007)	Ms. Crain countersued Sony alleging that the record company illegally employed unlicensed investigators in the State of Texas. Argued that this illegal collection of evidence amounted to "civil conspiracy" under Texas law.
UMG v. LINDOR (Brooklyn, NY, 2008)	Marie Lindor challenged the RIAA to explain why it demands \$750 per track in damages, arguing due process jurisprudence prohibits excessive statutory awards. This amounts to an unconstitutional violation of due process.
SONY BMG MUSIC v. TENENBAUM (Boston, MA, 2009)	Boston University graduate student ordered to pay \$675K to plaintiffs. Defendant openly admitted sharing music files over p2p network. Was represented by group of Harvard law students.
STATUTE	SIGNIFICANCE
Copyright Act of 1976	Remains the primary basis for copyright law in the United States.
Digital Millennium Copyright Act	Criminalization of circumvention of technology which protects copyright.
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)	International agreement administered by the World Trade Organization which sets minimum standards for intellectual property protections.

Copyright Term Extension Act of 1998	Extended duration of U.S. copyrights by 20 years.
--------------------------------------	---

APPENDIX C: TABLE OF CONTENTS

- Chapter 1: Introduction to File-Sharing Litigation

The Introduction provides the reader with a brief summation of the litigation campaign and related developments. In addition, the problematic of property rights in information is introduced.

- Chapter 2: Literature Review and Theoretical Framework

Chapter 2 begins with a critique of the existing political economy approaches to the study of the production of information. Autonomist Marxism and structuration theory are introduced as alternative approaches which may resolve some of the problems characteristic of existing approaches. The theoretical framework employed as a part of this study is developed by surveying various theoretical treatments of *power*, *resistance*, *class struggle*, *the state*, *technology*, and *social relations*.

- Chapter 3: Design and Methodology

The third chapter details the application of structuration theory to the research question. This includes an explanation of Giddens's three structural dimensions—*signification*, *domination*, and *legitimation*—and their relation to the social system of commoning. Subsidiary research questions are also introduced. The remainder of the chapter explains the two core components of the research project: the analysis of file-sharing litigation and survey research on file-sharers.

- Chapter 4: Political Economy of Copyright Law and File-Sharing Technology

The fourth chapter puts the legal conflict over peer-to-peer file-sharing into historical context. Recent developments in copyright law are explained by providing a brief overview of not only the history of the American approach to intellectual property law, but also its relation to the economic development of the music industry. The second half of the chapter contextualizes the development of peer-to-peer file-sharing technology as part of the transition from the industrial to the post-industrial economy. This is done by briefly surveying the development of peer-to-peer technology starting from the inception of the Internet to the emergence of contemporary file-sharing platforms.

- Chapter 5: The RIAA Litigation Campaign

This chapter provides an in-depth historical examination of the RIAA litigation campaign targeting individual file-sharers. Numerous cases and developments are highlighted to identify the effective limits to the overall success of the legal effort.

- Chapter 6: BitTorrent Litigation

This chapter updates readers on the more recent developments in file-sharing litigation. It begins with a look at the BitTorrent file-sharing platform and then proceeds to an examination of the attempts by various copyright groups to build upon the RIAA litigation model. Again, numerous cases and developments are highlighted to demonstrate the effective limits to the overall success of these legal efforts.

- Chapter 7: Survey of File-Sharers

Chapter 7 analyzes the structural dimensions of the file-sharing community by presenting the results of an online survey of file-sharers. I attempt to identify those rules/resources which are implicated in the practice of file-sharing while also investigating the impact of file-sharing litigation on the peer-to-peer community.

- Chapter 8: Conclusion

The findings of this dissertation are summarized and contextualized in Chapter 8. The theoretical approach taken as a part of this study is re-introduced and reconsidered. The history of the conflict over file-sharing and its structural dimensions are reviewed. This chapter concludes by arguing that peer-to-peer file-sharing is an articulation of the larger social dynamic of immaterial labor.

Bibliography

- Anderson, N. (2009, March 9). Hypocrisy or necessity? RIAA continues filing lawsuits . *Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/tech-policy/news/2009/03/hypocrisy-or-necessity-riaa-continues-filing-lawsuits.ars>
- Anderson, N. (2009, June 15). Sony lawyer: \$150K damages per song "certainly" appropriate. *Arstechnica*. Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2009/06/sony-lawyer-150k-damages-per-song-certainly-appropriate.ars>
- Anderson, N. (2009, June 16). Jammie Thomas takes the stand, admits to major misstep. *Arstechnica*. Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2009/06/jammie-thomas-takes-the-stand-admits-to-major-misstep.ars>
- Anderson, N. (2009, July 8). Has the RIAA sued 18,000 people...or 35,000?. *Arstechnica*. Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2009/07/has-the-riaa-sued-18000-people-or-35000.ars>
- Anderson, N. (2010a, June 3). ACLU, EFF seek to "sever" gigantic P2P lawsuits. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/06/aclu-eff-seek-to-sever-gigantic-p2p-lawsuits.ars>
- Anderson, N. (2010b, June 3). Handwritten legal filings can't stop P2P lawsuit juggernaut. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/06/handwritten-legal-filings-cant-stop-p2p-lawsuit-juggernaut.ars>
- Anderson, N. (2010, June 22). P2P lawyers tell judge: suing 5,000 "Does" at once is fine. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/06/p2p-lawyers-tell-judge-suing-5000-does-at-once-is-fine.ars>
- Anderson, N. (2010, October 7). US anti-P2P law firms sue more in 2010 than RIAA ever did. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/10/us-anti-p2p-law-firms-sue-more-in-2010-than-riaa-ever-did.ars>
- Anderson, N. (2010, August 10). New antipiracy countermeasures await returning students. *Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/tech-policy/news/2010/08/new-federal-antipiracy-regulations-await-returning-students.ars>
- Anderson, N. (2010, November 3). Third P2P verdict for Jammie Thomas: \$1.5 million.

- Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/tech-policy/news/2010/11/the-first-p2p-case-to.ars>
- Anderson, N. (2010, December 7). "It's organized crime": one P2P defendant speaks out. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/12/its-organized-crime-one-p2p-defendant-speaks-out.ars>
- Anderson, N. (2010, December 17). Judge kills massive P2P porn lawsuit, kneecaps copyright troll. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/12/judge-kills-massive-p2p-porn-lawsuit-kneecaps-copyright-troll.ars>
- Anderson, N. (2011, January 21). IFPI: Fighting music piracy is a government job. *Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/tech-policy/news/2011/01/ifpi-music-piracy-hurts-us-but-fighting-it-is-governments-job.ars>
- Anderson, N. (2011, January 27). Gay porn's P2P "amnesty": cough up \$1,000 and you won't be sued. *Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/tech-policy/news/2011/01/gay-porns-p2p-amnesty-cough-up-1000-and-you-wont-be-sued.ars>
- Anderson, N. (2011, February 16). Texas chainsaw massacre: senior judge "severs" most P2P lawsuits. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2011/02/texas-chainsaw-massacre-senior-judge-severs-most-p2p-lawsuits.ars>
- Anderson, N. (2011, February 26). Random defendant outlaws P2P attorney, gets lawsuit tossed. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2011/02/random-defendant-outlawyers-p2p-attorney-gets-lawsuit-tossed.ars>
- Anderson, N. (2011, March 4). Far Cry P2P defendant pens a heartfelt "not guilty" plea. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2011/03/far-cry-p2p-defendant-pens-a-heartfelt-not-guilty-plea.ars>
- Ang, I. (1985). *Watching Dallas*. London, Methuen.
- Attaway, F. (2010, October 5). MPAA Talks to Copygrounds About P2P File-sharing and Copyright. *Copygrounds*. Retrieved March 1, 2011, from <http://copygrounds.com/2010/10/05/mpaa-talks-to-copygrounds-about-p2p-file-sharing-and-copyright/>
- Bagdikian, B. H. (2000). *The Media Monopoly* (6th ed.). Boston: Beacon Press.

- Bainwol, M. (2006, January 7). Out: P2P Paranoia In: Platform Parity. *Billboard*, 118(1).
- Bainwol, M. (2009, June 6). Courting Success. *Billboard*, 121(22).
- Baldas, T. (2005, October 10). Music piracy defendants fighting back. *The National Law Journal*.
- Bangeman, E. (2007, February 7). Victim of RIAA "driftnet" awarded attorneys' fees. *Arstechnica*. Retrieved March 3, 2009, from <http://arstechnica.com/old/content/2007/02/8786.ars>
- Bangeman, E. (2007, April 10). Defendant prevails in another RIAA file-sharing case. *Arstechnica*. Retrieved March 3, 2009, from <http://arstechnica.com/tech-policy/news/2007/04/defendant-prevails-in-another-riaa-file-sharing-case.ars>
- Bangeman, E. (2007, June 4). RIAA throws in the towel in Atlantic v. Andersen. *Arstechnica*. Retrieved February 7, 2011, from <http://arstechnica.com/tech-policy/news/2007/06/riaa-throws-in-the-towel-in-atlantic-v-andersen.ars>
- Bangeman, E. (2007, July 16). RIAA's final tab for Capitol v. Foster: \$68,685.23. *Arstechnica*. Retrieved August 30, 2009, from <http://arstechnica.com/tech-policy/news/2007/07/riaas-final-tab-for-capitol-vs-foster-68685-23.ars>
- Bangeman, E. (2007, November 29). Oregon Attorney General criticizes RIAA's conduct in P2P cases. *Arstechnica*. Retrieved February 8, 2011, from <http://arstechnica.com/tech-policy/news/2007/11/oregon-attorney-general-criticizes-riaas-conduct-in-p2p-cases.ars>
- Bangeman, E. (2008, February 3). MediaSentry role in RIAA lawsuit comes under scrutiny. *Arstechnica*. Retrieved February 8, 2011, from <http://arstechnica.com/tech-policy/news/2008/02/mediasentry-role-in-riaa-lawsuit-comes-under-scrutiny.ars>
- Bangeman, E. (2008, April 2). Maine law students try to derail RIAA lawsuit express. *Arstechnica*. Retrieved February 8, 2011, from <http://arstechnica.com/tech-policy/news/2008/04/maine-law-students-try-to-derail-riaa-lawsuit-express.ars>
- Bangeman, E. (2008, April 21). Study: BitTorrent sees big growth, LimeWire still #1 P2P app. *Arstechnica*. Retrieved March 3, 2009, from <http://arstechnica.com/old/content/2008/04/study-bittorren-sees-big-growth-limewire-still-1-p2p-app.ars>
- Bangeman, E. (2008, May 5). Andersen relentless in quest to nail the RIAA. *Arstechnica*.

- Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2008/05/andersen-relentless-in-quest-to-nail-the-riaa.ars>
- Bangeman, E. (2009, April 28). Four years and two lawsuits later, RIAA settles for \$7,000. *Arstechnica*. Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2009/04/four-years-and-two-lawsuits-later-riaa-settles-for-7000.ars>
- Baran, P. A. and P. M. Sweezy (1968). *Monopoly capital: an essay on the American economic and social order*. New York, Modern Reader Paperbacks.
- Barbrook, R. (2000). "Cyber-Communism: How the Americans are Superseding Capitalism in Cyberspace." *Science as Culture* 9(1): p. 35.
- Barbrook, R. (2003). "Giving is Receiving." *Digital Creativity* 14(2): p. 4.
- Barbrook, R., & Cameron, A. (2001). Californian Ideology. In P. Ludlow (Ed.), *Crypto Anarchy, Cyberstates, and Pirate Utopias* (pp. 363-387). Cambridge: The MIT Press.
- Becker, L. B. and T. Vlad (2003). Introduction and Overview. in *Copyright and Consequences: Central European and U.S. Perspectives*. Cresskill, NJ, Hampton Press: pp. 3-14.
- Beckerman, R. (2005, September 16). Priority Records v. Chan: RIAA Case Against Mother Dismissed; No Attorneys Fees; Guardian Ad Litem must be appointed for 13 yr old defendant. *Recording Industry vs The People*. Retrieved February 11, 2011, from <http://recordingindustryvspeople.blogspot.com/2005/09/priority-records-v-chan-riaa-case.html>
- Beckerman, R. (2007, February 13). RIAA Adopts New Policy, offers "Pre-Doe settlement option" if ISP Holds Logs Longer, Asks ISP's to Correct Identification Mistakes. *Recording Industry vs The People*. Retrieved February 11, 2011, from <http://recordingindustryvspeople.blogspot.com/2007/02/riaa-adopts-new-policy-offers-pre-doe.html>
- Beckerman, R. (2008). "Large Recording Companies v. The Defenseless: Some Common Sense Solutions to the Challenges of the RIAA Litigations." *The Judges' Journal* 47(3).
- Beckerman, R. (2008, April 9). How the RIAA Litigation Process Works. *Recording Industry vs The People*. Retrieved February 11, 2011, from <http://beckermanlegal.com/pdf/?file=/howriaa.htm>

- Beckerman, R. (2009). "Content Holders vs. The Web: 2008 US Copyright Law Victories Point to Robust Internet." *Journal of Internet Law*, January: pp. 16-21.
- Beckerman, R. (2009, May 3). RIAA keeps on filing new cases. *Recording Industry vs The People*. Retrieved March 1, 2011, from <http://recordingindustryvspeople.blogspot.com/2009/05/riaa-keeps-on-filing-new-cases.html>
- Beckerman, R. (2010, October 28). Ray Beckerman Talks to Copygrounds. *Copygrounds*. Retrieved February 11, 2011, from <http://copygrounds.com/2010/10/28/ray-beckerman-talks-to-copygrounds/>
- Bender, M. T., & Wang, Y. (2009). The Impact of Digital Piracy on Music Sales: A Cross-Country Analysis. *International Social Science Review*, 84(3/4).
- Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven, Yale University Press.
- Bettig, R. V. (1996). *Copyrighting Culture: The Political Economy of Intellectual Property*. Boulder: Westview Press.
- Bjiker, W. E., T. P. Hughes, & Pinch, T. J. (1987). *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge, MIT Press.
- Borland, J. (2001, May 25). RIAA sues Aimster over file swapping. *CNET*. Retrieved February 10, 2011, from <http://news.cnet.com/2100-1023-258259.html>
- Borland, J. (2001, September 24). Napster reaches settlement with publishers. *CNET*. Retrieved June 2, 2010, from <http://news.cnet.com/2100-1023-273394.html>
- Borland, J. (2001, October 3). Suit hits popular post-Napster network. *CNET*. Retrieved February 10, 2011, from http://news.cnet.com/Suit-hits-popular-post-Napster-network/2100-1023_3-273855.html
- Borland, J. (2003, September 8). RIAA sues 261 file swappers. *CNET*. Retrieved February 10, 2011, from http://news.cnet.com/2100-1023_3-5072564.html
- Borland, J. (2003, September 19). RIAA sues iMesh file-trading firm. *CNET*. Retrieved February 10, 2011, from http://news.cnet.com/2100-1025_3-5079454.html?part=msnbc-cnet&tag=alert&form=feed&subj=cnetnews
- Borland, J. (2003, October 17). Record industry warns of new lawsuits. *CNET*. Retrieved

- February 10, 2011, from http://news.cnet.com/Record-industry-warns-of-new-lawsuits/2100-1027_3-5093078.html?tag=nl
- Bowman, L. M. (2003, June 25). Labels aim big guns at small file swappers. *CNET*. Retrieved February 10, 2011, from http://news.cnet.com/Labels-aim-big-guns-at-small-file-swappers/2100-1027_3-1020876.html
- Boyle, J. (1996). *Shamans, software, and spleens: law and the construction of the information society*. Cambridge, Mass.: Harvard University Press.
- Boyle, J. (2003). "The Second Enclosure Movement and the Construction of the Public Domain." *Law and Contemporary Problems* 66(33): p. 41.
- Briggs, A., & Burke, P. (2002). *A Social History of the Media: From Gutenberg to the Internet*. Cambridge: Polity Press.
- Bruno, A. (2008, October 18). A New Battle Plan. *Billboard*, 120(42).
- Buskirk, E. V. (2007, February 13). Leaked RIAA Letter Asks ISPs for Help in Thwarting File-sharing. *Wired*. Retrieved February 11, 2011, from http://www.wired.com/listening_post/2007/02/leaked_riaa_let/
- Butler, S. (2007, April 21). Class(room) Action. *Billboard*, 119(16).
- Butler, S. (2008, June 14). Casting the Net. *Billboard*, 120(24).
- Bylund, A. (2006, November 3). RIAA sues Santangelo children. *Arstechnica*. Retrieved February 7, 2011, from <http://arstechnica.com/business/news/2006/11/8150.ars>
- Cenite, M., Wang, M. W., Peiwen, C., & Chan, G. S. (2009). More Than Just Free Content: Motivations of Peer-to-Peer File-sharers. *Journal of Communication Inquiry*, 33(3), pp. 206-221.
- Chad, E. R., & Schultz, W. D. (2009). RIAA tempers tactics; Recording Industry Association of America's new strategy is to focus on relationships with ISPs. *National Law Journal*, 31(20).
- Cheng, J. (2007, February 22). Forget party schools: The RIAA lists the top piracy schools in the US. *Arstechnica*. Retrieved February 7, 2011, from <http://arstechnica.com/old/content/2007/02/8900.ars>
- Cheng, J. (2010, September 27). Porn studios borrowing from RIAA playbook with P2P

- lawsuits. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/tech-policy/news/2010/09/porn-studios-borrowing-from-riaa-playbook-with-p2p-lawsuits.ars>
- Çiflikli, C., Gezer, A., Özşahin, A. T., & Özkasap, Z. (2010). BitTorrent packet traffic features over IPv6 and IPv4. *Simulation Modeling Practice and Theory*, 18(9), pp. 1214-1224.
- Cleaver, H. (1981). Technology as Political Weaponry. *The Responsibility of the Scientific and Technological Enterprise in Technology Transfer*. American Association for the Advancement of Science. Translated and reprinted in *El Gallo Illustrado*, No. 1243, (Mexico City, 1986).
- Cleaver, H. (2000). *Reading Capital Politically*. London, Calverts Press.
- Coase, R. (1993). The Nature of the Firm. In O. Williamson & S. Winter (Eds.), *The Nature of the Firm: Origins, Evolution and Development* (pp. 18-74). Oxford: Oxford University Press.
- Coleman, S. and N. Dyer-Witford (2007). "Playing on the digital commons: collectivities, capital and contestation in videogame culture." *Media, Culture, & Society* 29(6): 934-953.
- Compaine, B. (2004). Domination Fantasies. *Reason*, 35(8).
- Croteau, D., & Hoynes, W. (2001). *The Business of Media: Corporate Media and the Public Interest*. Thousand Oaks: Pine Forge Press.
- Czitrom, D. J. (1982). *Media and the American Mind: From Morse to McLuhan*. Chapel Hill: University of North Carolina Press.
- D'Andrade, H. (2008, August 11). Universities Quietly Fighting Back Against RIAA Tactics . *EFF*. Retrieved February 8, 2011, from <https://www.eff.org/deeplinks/2008/08/universities-quietly-fighting-back-against-riaa-ta>
- Daniels, B., Leedy, D., & Sills, S. D. (1998). *Movie Money: Understanding Hollywood's (Creative) Accounting Practices*. Los Angeles: Silman-James Press.
- Dean, K. (2003, April 5). RIAA Hits Students Where It Hurts. *Wired*. Retrieved February 11, 2011, from <http://www.wired.com/entertainment/music/news/2003/04/58351>
- Dean, K. (2003, August 1). Senator Wants Answers From RIAA. *Wired*. Retrieved February 10, 2011, from <http://www.wired.com/politics/law/news/2003/08/59862>

- Dean, K. (2003, September 17). Senator Takes a Swing at RIAA. *Wired*. Retrieved February 10, 2011, from <http://www.wired.com/politics/law/news/2003/09/60461?currentPage=all>
- Delahunty, J. (2006, November 10) Lindor challenges RIAA '\$750' per track' damages. *Afterdawn*. Retrieved March 3, 2009, from <http://www.afterdawn.com/news/archive/8114.cfm>.
- DeSanctis, G., & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. *Organization Science*, 5(2), 121-147.
- Dornfest, R., & Brickley, D. (2001). Metadata. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 191-202). Cambridge: O'Reilly.
- Doyle, G. (2002). *Understanding Media Economics*. Thousand Oaks: Sage Publications.
- Drumm, H. M. (2003). Life After Napster: Will Its Successors Share Its Fate? *Texas Review of Entertainment & Sports Law*, 5(1), 157-190.
- Dyer-Witheford, N. (1999). *Cyber-Marx: Cycles and Circuits of Struggle in High-Technology Capitalism*. Chicago, University of Illinois Press.
- Edelman, B. (1979). *Ownership of the Image: Elements for a Marxist Theory of Law*. Boston: Routledge & Kegan Paul.
- EFF. (2007). RIAA v. The People: Four Years Later. *EFF*. Retrieved February 7, 2011, from http://w2.eff.org/IP/P2P/riaa_at_four.pdf
- EFF. (2008, September). RIAA v. The People: Five Years Later. *EFF*. Retrieved February 7, 2011, from <https://www.eff.org/wp/riaa-v-people-years-later>
- Eliashberg, J. (2005). The Film Exhibition Business: Critical Issues, Practice, and Research. In C. C. Moul (Ed.), *A Concise Handbook of Movie Industry Economics* (pp. 138-162). New York: Cambridge University Press.
- Ellis, L. (2006, May 7). BitTorrent's Swarms Have a Deadly Bite On Broadband Nets. *Multichannelnews*. Retrieved March 1, 2011, from http://www.multichannel.com/article/87516-BitTorrent_s_Swarms_Have_a_Deadly_Bite_On_Broadband_Nets.php
- Enigmax. (2010, September 19). 4chan to DDoS RIAA Next--Is This the Protest of the

- Future?. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/4chan-to-ddos-riaa-next-is-this-the-protest-of-the-future-100919/>
- Enigmax. (2011, January 26). Movie Studio Tells BitTorrent Users: Turn Yourselves In!. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/movie-studio-tells-bittorrent-users-turn-yourselves-in-110126/>
- Enigmax. (2011, February 16). Cases Against Thousands of Alleged BitTorrent Pirates Dismissed. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/cases-against-thousands-of-alleged-bittorrent-pirates-dismissed-110216/>
- Enigmax. (2011, February 17). File-Sharers Start Handing Over \$1,000 Each in Bizarre Amnesty Program. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/file-sharers-start-handing-over-1000-each-in-bizarre-amnesty-program-110217/>
- Ernesto. (2007, August 17). Comcast Throttles BitTorrent Traffic, Seeding Impossible. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/comcast-throttles-bittorrent-traffic-seeding-impossible/>
- Ernesto. (2010, October 6). Cisco Expects P2P Traffic to Double by 2014. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/cisco-expects-p2p-traffic-to-double-by-2014-100611/>
- Ernesto. (2010, November 2). Law Professor Defends Alleged Hurt Locker Pirates. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/law-professor-defends-alleged-hurt-locker-pirates-101101/>
- Ernesto. (2010, November 24). Hurt Locker Makers Sue Lawyer Who Helped 'BitTorrent' Defendants. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/hurt-locker-sue-lawyer-who-helped-bittorrent-defendants-101124/>
- Ernesto. (2010, December 5). MPAA To Target Pirating College Students and Rogue Universities. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/mpaa-to-target-pirating-college-students-and-rogue-universities-101205/>
- Ernesto. (2010, December 21). isoHunt Continues Legal Fight to Thwart MPAA Censorship. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/isohunt-continues-legal-fight-to-thwart-mpaa-censorship-101221/>

- Ernesto. (2011, January 18). "Sara Jay in Heat" BitTorrent Downloaders Sued. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/sara-jay-in-heat-bittorrent-downloaders-sued/>
- Ernesto. (2011, January 25). BiTorrent Users Sued for Sharing Paris Hilton's Sex Tape. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/bittorrent-users-sued-paris-hilton-sex-tape-110125/>
- Ernesto. (2011, January 30). 100,000 P2P Users Sued in US Mass Lawsuits. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/100000-p2p-users-sued-in-us-mass-lawsuits-110130/>
- Ernesto. (2011, February 8). Makers of 'The Expendables' Sue 6,500 BitTorrent Users. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/makers-of-the-expendables-sue-6500-bittorrent-users-110208/>
- Ernesto. (2011, February 20). Google Gets Involved in BitTorrent Search Engine Lawsuit. *TorrentFreak*. Retrieved March 1, 2011, from <http://torrentfreak.com/google-gets-involved-in-bittorrent-search-engine-lawsuit-110220/>
- Evangelista, B. (2002). Napster runs out of lives--judge rules against sale. *San Francisco Chronicle*. Retrieved June 2, 2010, from <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2002/09/04/BU138263.DTL>
- Fisher, K. (2007, March 26). Students largely ignore RIAA instant settlement offers. *Arstechnica*. Retrieved February 7, 2011, from <http://arstechnica.com/tech-policy/news/2007/03/students-largely-ignore-riaa-instant-settlement-offers.ars>
- Fisher, K. (2007, July 4) RIAA sued for using illegal investigatory practices . *Arstechnica*. Retrieved March 3, 2009, from <http://arstechnica.com/tech-policy/news/2007/07.riaa-sued-for-using-illegal-investigatory-practices.ars>
- Fiske, J. (2004). *Understanding Popular Culture*. London, Routledge.
- Foucault, M. (1980). Prison Talk. *Power/Knowledge: Selected Interviews & Other Writings 1972-1977*. C. Gordon. New York, Pantheon Books: pp. 37-54.
- Foucault, M. (1982). The Subject and Power. In H. L. Dreyfus and P. Rabinow (Eds). *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago, University of Chicago. 2nd edition.
- Fowles, J. (1992). *Starstruck: Celebrity Performers and the American Public*.

- Washington: Smithsonian Institution Press.
- Gardner, E. (2010, May 28). 'Hurt Locker' producer files massive antipiracy lawsuit. *The Hollywood Reporter*. Retrieved March 1, 2011, from <http://reporter.blogs.com/thresq/2010/05/hurt-locker-pirates-lawsuit.html>
- Garner, B. A. (2006). *Black's Law Dictionary* (Third Pocket Edition). St. Paul: Thomson West.
- Garrity, B., & Butler, S. (2005, November 19). P2Ps Search For Life. *Billboard*, 117(47).
- Ghosemajumder, S. (2002). Advanced Peer-Based Technology Business Models: A new economic framework for the digital distribution of music, film, and other intellectual property works. Massachusetts Institute of Technology.
- Giddens, A. (1986). *The Constitution of Society*. Berkley: University of California Press.
- Giddens, A. (2008). *Capitalism and Modern Social Theory: An Analysis of the Writings of Marx, Durkheim, and Max Weber*. New York, Cambridge University Press.
- Giesler, M. (2006). "Consumer Gift Systems." *Journal of Consumer Research* 33(September): pp. 283-290.
- Goldsmith, J. L., & Wu, T. (2006). *Who controls the Internet?: illusions of a borderless world*. New York: Oxford University Press.
- Goldstein, P. (2003). *Copyright's highway: from Gutenberg to the celestial jukebox* (Rev. ed.). Stanford, Calif.: Stanford University Press.
- Gorman, R. A., & Ginsburg, J. C. (2006). *Copyright: cases and materials* (7th ed.). New York: Foundation Press.
- Graham, J. (2003, September 10). RIAA lawsuits bring consternation, chaos. *USA Today*. Retrieved February 10, 2011, from http://www.usatoday.com/tech/news/techpolicy/2003-09-10-riaa-suit-reax_x.htm
- Graham, P. (2006). *Hypercapitalism: new media, language, and social perceptions of value*. New York, Peter Lang.
- Greene, T. C. (2000, July 24). MPAA, RIAA sue Scour over copyrights: Valenti & Co eat their own. *TheRegister*. Retrieved March 1, 2011, from http://www.theregister.co.uk/2000/07/24/mpaa_riaa_sue_scour_over/
- Gross, G. (2003, September 17). Congress Scrutinizes RIAA Tactics. *PCWorld*.

- Retrieved February 10, 2011, from
http://www.pcworld.com/article/112535/congress_scrutinizes_riaa_tactics.html
- Grossberg, L. (1992). *We Gotta Get Out of This Place: Popular Conservatism and Postmodern Culture*. New York, Routledge.
- Grossberg, L. (1995). "Cultural Studies vs. Political Economy: Is Anybody Else Bored with this Debate." *Critical Studies in Mass Communication* 12(March).
- Gruenwedel, E., & Garrity, B. (2002, September 28). RIAA, MPAA Push ISPs To Combat Illegal File-sharing. *Billboard*, 114(39).
- Hardt, M., & Negri, A. (2004). *Multitude: War and Democracy in the Age of Empire*. New York: The Penguin Press.
- Hardt, M., & Negri, A. (2009). *Commonwealth*. Cambridge, Belknap Press.
- Hartley, J. (2002) *Communication, Cultural and Media Studies: The Key Concepts*. New York City: Routledge.
- Harvey, D. (2005). *A Brief History of Neoliberalism*. New York, Oxford University Press.
- Harvey, D. (2006). *Limits To Capital: New and Fully Updated Edition*. New York, Verso.
- Healey, J. (2003). Streamwaves Aims to Get Kazaa Users to Pay. *LA Times*. Retrieved May 10, 2010, from <http://articles.latimes.com/2003/jun/24/business/fi-stream24>
- Healey, J. (2008, September 2). Another file-sharer faces costly day of reckoning. *Los Angeles Times*. Retrieved February 7, 2011, from <http://latimesblogs.latimes.com/technology/2008/09/riaa-file-shari.html>
- Holland, B. (2005, April 23). RIAA Suits to Hit Students. *Billboard*, 117(17).
- Hong, T. (2001). Performance. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 203-241). Cambridge: O'Reilly.
- How Skype and Kazaa changed the net. (2005, June 17). *BBC News*. Retrieved March 3, 2009, from http://news.bbc.co.uk/2/hi/programmes/click_online/4102692.stm
- Hughes, J. (1999). "'Recoding' Intellectual Property and Overlooked Audience Interests." *Texas Law Review* 77(4): p. 88.

- Hull, G. P. (2004). *The Recording Industry: Second Edition*. New York: Routledge.
- Innis, H. A. (1951). *The bias of communication*. Toronto: University of Toronto Press.
- IIPA's New Economic Study Reveals the Copyright Industries Remain a Critical Driving Force in the U.S. Economy (2009, July 20). *International Intellectual Property Alliance Press Release*. Retrieved June 11, 2010, from <http://www.iipa.com/pdf/IIPACopyrightIndustriesReport2003-2007PressRelease.pdf>
- Jenkins, H. (2006). *Convergence culture: where old and new media collide*. New York, New York University Press.
- Johns, A. (2009). *Piracy: The Intellectual Property Wars From Gutenberg To Gates*. Chicago: The University of Chicago Press.
- Jury rules against Minn mom in download case. (2009, June 18). *Associated Press*. Retrieved June 18, 2009, from http://www.msnbc.msn.com/id/31432024/ns/business-local_business/
- Kan, G. (2001). Gnutella. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 94-122). Cambridge: O'Reilly.
- Kaplin, W. A., & Lee, B. A. (2006). *The Law of Higher Education: A Comprehensive Guide to Legal Implications of Administrative Decision Making, Volume 1* (Fourth ed.). San Francisco: Jossey-Bass.
- Kazaa site becomes legal service. (2006, July 27). *BBC News*. Retrieved May 10, 2010, from <http://news.bbc.co.uk/2/hi/5220406.stm>
- Keeping pirates at bay. (2009, September 5). *Economist*, 392(8647), pp. 3-4.
- Kelley, R. D. G. (1996). *Race Rebels: Culture, Politics, and the Black Working Class*. New York, The Free Press.
- Kelly, S. (2006, April 13). BitTorrent battles over bandwidth . *BBC News*. Retrieved March 1, 2011, from http://news.bbc.co.uk/2/hi/programmes/click_online/4905660.stm
- Kennedy, H. (2003, September 11). C-Notes For Brianna: Outpouring of donations in download suit. *NY Daily News*. Retrieved February 10, 2011, from http://www.nydailynews.com/archives/news/2003/09/11/2003-09-11_c-notes_for_brianna_outpouri.html

- Kollock, P. (1999). The economies of online cooperation: gifts and public goods in cyberspace. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace* (pp. 220-242). New York: Routledge.
- Kollock, P., & Smith, M. A. (1999). Communities in cyberspace. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace* (pp. 3-28). New York City: Routledge.
- Koranteng, J. (2004, January 31). IFPI Backs RIAA-Style Lawsuits. *Billboard*, 116(5).
- Kravets, D. (2008, September 24). Judge Declares Mistrial in RIAA-Jammie Thomas Trial. *Wired*. Retrieved August 30, 2010, from <http://www.wired.com/threatlevel/2008/09/not-for-publica/>
- Kravets, D. (2009, June 18). Jury in RIAA Trial Slaps \$2 Million Fine on Jammie Thomas. *Wired*. Retrieved August 30, 2010, from <http://www.wired.com/threatlevel/2009/06/riaa-jury-slaps-2-million-fine-on-jammie-thomas/>
- Landes, W. M., & Posner, R. A. (2003). *The economic structure of intellectual property law*. Cambridge, Mass.: Belknap Press of Harvard University Press.
- Lasar, M. (2011, March 4). New music industry plan: halt flow of money to pirate music sites. *Arstechnica*. Retrieved March 5, 2011, from <http://arstechnica.com/web/news/2011/03/new-music-industry-plan-halt-flow-of-money-to-pirate-music-sites.ars>
- Lavoie, D. (2009, July 21) Jury awards \$675K in Boston music downloading case. *Associated Press*. Retrieved August 1, 2009, from http://tech.yahoo.com/news/ap/20990731/ap_on_hi_te/us_tec_music_downloading
- Lazzarato, M. (1996). Immaterial Labor. In P. Virno & M. Hardt (Eds.), *Radical Thought in Italy: A Potential Politics* (pp. 133-150). Minneapolis: University of Minnesota Press.
- Leeds, J. (2007, October 5). Labels Win Suit Against Song Sharer. *New York Times*. Retrieved February 7, 2011, from http://www.nytimes.com/2007/10/05/business/media/05music.html?_r=1
- Lessig, L. (1999). *Code: And Other Laws of Cyberspace*. New York: Basic Books.
- Lessig, L. (2001). *The future of ideas: the fate of the commons in a connected world* (1st ed.). New York: Random House.

- Lessig, L. (2004). *Free Culture: The Nature and Future of Creativity*. New York: Penguin Books.
- Levenson, M. (2008, April 4). Music downloaders win round in court. *The Boston Globe*. Retrieved February 7, 2011, from http://www.boston.com/news/local/articles/2008/04/04/music_downloaders_win_round_in_court/
- Levine, J. (2004, December 20). If It Works, You Can Break It. *Forbes*. Retrieved June 3, 2010, from http://www.forbes.com/global/2004/1220/016_3.html
- Levy, S. (2005, November 28). No, It's Not the New Napster. *Newsweek*, 146(22), E4-E4.
- Li, M., Yu, J., & Wu, J. (2008). Free-Riding on BitTorrent-Like Peer-to-Peer File-sharing Systems: Modeling Analysis and Improvement. *IEEE Transactions on Parallel and Distributed Systems*, 19(7), 954-966.
- Linebaugh, P. (2008). *The Magna Carta Manifesto: Liberties and Commons for All*. Los Angeles, University of California Press.
- Lipka, S. (2008, October 31). Harvard Law Professor Tries New Tack Against RIAA. *Chronicle of Higher Education*. Retrieved November 14, 2010, from <http://chronicle.com/blogs/wiredcampus/harvard-law-professor-takes-new-tack-against-riaa/4351>
- Litman, J. (2006). *Digital copyright* (Pbk. ed.). Amherst, N.Y.: Prometheus Books.
- Locklear, F. (2004, December 14). MPAA lawsuits target BitTorrent, eDonkey and Direct Connect networks. *Arstechnica*. Retrieved March 1, 2011, from <http://arstechnica.com/old/content/2004/12/4467.ars>
- Lohmann, F. V. (2003, September 10). 'Amnesty' for Music File-sharing Is a Sham. *Los Angeles Times*.
- Lohmann, F. V. (2008, April 2). Making Available is Not Distribution, Says Court in London-Sire v. Doe. *EFF*. Retrieved February 10, 2011, from <https://www.eff.org/deeplinks/2008/04/making-available-distribution-says-court-london-sire-v-doe>
- Lohmann, F. V. (2008, April 29). Big Victory in Atlantic v. Howell: Court Rejects RIAA

- "Making Available" Theory. *EFF*. Retrieved March 1, 2011, from <https://www.eff.org/deeplinks/2008/04/big-victory-atlantic-v-howell-court-rejects-making>
- Lohmann, F. V. (2008, December 19). RIAA v. The People Turns from Lawsuits to 3 Strikes. *EFF*. Retrieved March 1, 2011, from <https://www.eff.org/deeplinks/2008/12/riaa-v-people-turns-lawsuits-3-strikes>
- Macavinta, C. (1999, December 7). Recording industry sues music start-up, cites black market. *CNET*. Retrieved February 10, 2011, from http://news.cnet.com/Recording-industry-sues-music-start-up,-cites-black-market/2100-1023_3-234092.html?tag=st.rm
- Machlup, F. (1962). *The production and distribution of knowledge in the United States*. Princeton, N.J., Princeton University Press.
- Macpherson, C. B. (2008). *The Meaning of Property. Property: Mainstream and Critical Positions*. Toronto, University of Toronto Press: pp. 1-14.
- Madden, M. (2009). The State of Music Online: Ten Years After Napster. *Pew Internet & American Life Project*. Retrieved May 20, 2010, from <http://www.pewinternet.org/Reports/2009/9-The-State-of-Music-Online-Ten-Years-After-Napster.aspx>
- Mariano, G. (2002, June 18). Audiogalaxy to ask first, trade later. *CNET*. Retrieved February 2, 2011, from <http://news.cnet.com/2100-1023-936932.html>
- Mark, R. (2004, October 12). High Court Bounces Latest RIAA Effort. *InternetNews*. Retrieved February 11, 2011, from <http://www.internetnews.com/bus-news/article.php/3420681/High+Court+Bounces+Latest+RIAA+Effort.htm>
- Marshall, C. and G. B. Rossman (2006). *Designing Qualitative Research: Fourth Edition*. Thousand Oaks, Sage.
- Marx, K. (1978). Alienation and Social Classes. In R.C. Tucker (Ed.), *The Marx-Engels Reader* (2nd ed., pp. 133-135). New York, W. W. Norton & Company.
- Marx, K. (1978b). The German Ideology. In R.C. Tucker (Ed.), *The Marx-Engels Reader* (2nd ed., pp. 146-202). New York, W. W. Norton & Company.
- Marx, K. (1978c). Manifesto of the Communist Party. In R.C. Tucker (Ed.), *The Marx-Engels Reader* (2nd ed., pp. 469-500). New York, W. W. Norton & Company.
- Marx, K. (1978d). Wage Labour and Capital. In R.C. Tucker (Ed.), *The Marx-Engels*

- Reader* (2nd ed., pp. 203-217). New York, W. W. Norton & Company.
- Marx, K. (1990). *Capital: A Critique of Political Economy Volume 1*. London, Penguin Classics.
- Marx, K. (1991). *Capital: A Critique of Political Economy Volume 3*. London, Penguin Classic.
- Marx, K. (1992). *Capital: A Critique of Political Economy Volume 2*. London, Penguin Classic.
- Marx, K. (1993). *Grundrisse: Foundations of the Critique of Political Economy (Rough Draft)*. London, Penguin Classics.
- Masnick, M. (2011, February 11). Public Citizen & EFF File For Sanctions Against Anti-P2P Lawyer Evan Stone. *Techdirt*. Retrieved March 1, 2011, from <http://www.techdirt.com//blog.php?company=mick+haig+productions&edition=techdirt>
- McBride, S. (2009, January 5). Changing Tack, RIAA Ditches MediaSentry. *The Wall Street Journal Online*. Retrieved March 1, 2011, from <http://online.wsj.com/article/SB123109364085551895.html>
- McBride, S., & Smith, E. (2008, December 19). Music industry to abandon mass suits. *The Wall Street Journal*. Retrieved February 11, 2011, from <http://online.wsj.com/article/SB122966038836021137.html>
- McChesney, R. W. (1993). *Telecommunications, Mass Media, & Democracy: The Battle for the Control of U.S. Broadcasting, 1928-1935*. New York: Oxford University Press.
- McChesney, R. W. (2004). *The Problem of the Media: U.S. Communication Politics in the 21st Century*. New York: Monthly Review Press.
- McCullagh, D. (2007, October 19). Comcast really does block BitTorrent traffic after all. *CNET*. Retrieved March 1, 2011, from http://news.cnet.com/8301-13578_3-9800629-38.html
- McDaniel, T. (2010, June 10). P2P Traffic Predicted To Double by 2014; Online Video to Dominate. *Dailytech*. Retrieved March 1, 2011, from <http://www.dailytech.com/P2P+Traffic+Predicted+To+Double+by+2014+Online+Video+to+Dominate/article18678.htm>
- Mennecke, T. (2005, June 2). eDonkey2000 Nearly Double the Size of FastTrack. *Slyck*.

- Retrieved May 10, 2010, from <http://www.slyck.com/news.php?story=814>
- Mennecke, T. (2007, February 28). RIAA Announces New Campus Lawsuit Strategy. *Slyck*. Retrieved February 8, 2011, from <http://www.slyck.com/story1422.html>
- Mennecke, T. (2009, November 17). The Pirate Bay Trackers Go Offline Forever. *Slyck*. Retrieved March 1, 2011, from http://www.slyck.com/story1880_The_Pirate_Bay_Trackers_Go_Offline_Forever
- Mennecke, T. (2010, May 12). RIAA Wins: Limewire Found Liable for Copyright Infringement. *Slyck*. Retrieved February 11, 2011, from http://www.slyck.com/story1960_RIAA_Wins_Limewire_Found_Liable_for_Copyright_Infringement
- Mensch, E. (1990). The History of Mainstream Legal Thought. *The Politics of Law: A Progressive Critique*. D. Kairys. New York, Pantheon Books: 13-38.
- Middleton, K. R. (2003). U.S. Copyright Issues in Digital Publishing. In *Copyright and Consequences: Central European and U.S. Perspectives* (pp. 53-74). Cresskill, NJ: Hampton Press.
- MidnightNotes (2009) Promissory Notes: From Crisis to Commons. *MidnightNotes*. Retrieved March 1, 2010, from <http://www.midnightnotes.org/Promissory%20Notes.pdf>
- Minar, N., & Hedlund, M. (2001). A Network of Peers: Peer-to-Peer Models Through the History of the Internet. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 3-20). Cambridge: O'Reilly.
- Mosco, V. (1988). Introduction: information in the pay-per society. *The Political Economy of Information*. V. Mosco and J. Wasko. Madison, The University of Wisconsin Press: pp. 3-26.
- Mosco, V. (1996). *The political economy of communication: rethinking and renewal*. London, [Eng.]: Thousand Oaks, Calif., SAGE Publications.
- Moul, C. C. (2005). Introduction. In C. C. Moul (Ed.), *A Concise Handbook of Movie Industry Economics* (pp. 1-4). New York: Cambridge University Press.
- Moul, C. C., & Shugan, S. M. (2005). Theatrical Release and the Launching of Motion Pictures. In C. C. Moul (Ed.), *A Concise Handbook of Movie Industry Economics* (pp. 80-137). New York: Cambridge University Press.
- Moya, J. (2010, December 9). Researcher Calls Seeders “Robin Hoods of the Digital

- Age". *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/91510/researcher-calls-seeders-robin-hoods-of-the-digital-age/>
- Moya, J. (2010, December 21). Judge Deals Another Setback to Mass BitTorrent Lawsuits. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/91640/judge-deals-another-setback-to-mass-bittorrent-lawsuits/>
- Moya, J. (2011, January 3). BitTorrent Mainline, uTorrent Reach 100Mln Combined Monthly Users. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/91839/bittorrent-mainline-utorrent-reach-100mln-combined-monthly-users/>
- Moya, J. (2011, January 7). RIAA Admits P2P Not Solely to Blame for Decreased Music Sales. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/91984/riaa-admits-p2p-not-solely-to-blame-for-decreased-music-sales/>
- Moya, J. (2011, January 20). USCG Refiles Several P2P Lawsuits – in Minnesota. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92149/uscg-refiles-several-p2p-lawsuits-in-minnesota/>
- Moya, J. (2011, January 25). China Authorities Threaten BitTorrent Sites with Prison Time. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92299/china-authorities-threaten-bittorrent-sites-with-prison-time/>
- Moya, J. (2011, January 26). ACS: Law Quits Mass P2P Suits, Blames Harassment by Critics. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92332/acs-law-quits-mass-p2p-suits-blames-harassment-by-critics/>
- Moya, J. (2011b, January 26). Google Begins Filtering Cyberlocker, BitTorrent Search Results. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92348/google-begins-filtering-cyberlocker-bittorrent-search-results/>
- Moya, J. (2011, January 28). Dutch Anti-P2P Group, MPAA Shutter 12 BitTorrent Sites. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92385/dutch-anti-p2p-group-mpaa-shutter-12-bittorrent-sites/>

- Moya, J. (2011, January 31). 99,924 Sued So Far in Mass BitTorrent Lawsuit Campaigns. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92400/99-924-sued-so-far-in-mass-bittorrent-lawsuit-campaigns/>
- Moya, J. (2011a, February 15). FAST Wants ACS: Law's Mass P2P Trial to Continue. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92607/fast-wants-ac-s-laws-mass-p2p-trial-to-continue/>
- Moya, J. (2011b, February 15). Feds Seize 18 More Sites to "Protect Consumers". *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92604/feds-seize-18-more-sites-to-protect-consumers/>
- Moya, J. (2011, February 17). Senators Claim Increased Site Seizures Necessary to "Protect US Jobs". *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92620/senators-claim-increased-site-seizures-necessary-to-protect-us-jobs/>
- Moya, J. (2011a, February 25). Piracy Who? MPAA Celebrates 5th Consecutive Year of Record Profits. *Zeropaid*. Retrieved March 1, 2011, from <http://www.zeropaid.com/news/92692/piracy-who-mpaa-celebrates-5th-consecutive-year-of-record-profits/>
- Moya, J. (2011b, February 25). RIAA Defends \$1.5 Million Thomas File-Sharing Verdict. *Zeropaid*. Retrieved February 11, 2011, from <http://www.zeropaid.com/news/92698/riaa-defends-1-5-million-thomas-file-sharing-verdict/>
- Music Biz Kills Amnesty Program (2004, April 19). *Wired*. Retrieved March 1, 2011, from <http://www.wired.com/entertainment/music/news/2004/04/63133>
- Neeson, J. M. (1996). *Commoners: Common Right, Enclosure and Social Change in England, 1700-1820*. New York, Cambridge University Press.
- Negri, A. (1968). Keynes and the Capitalist Theory of the State post-1929. *Revolution Retrieved: Selected Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects* 1967-83. London, Red Notes: pp. 5-42.
- Negri, A. (2005). *The Politics of Subversion: A Manifesto for the Twenty-First Century*. Malden, Polity Press.
- Newton, J. (2007, March 28). RIAA vs Kylee hits the mainstream. *p2pnet*. Retrieved

- February 11, 2011, from <http://www.p2pnet.net/story/11792>
- Newton, J. (2007, June 5). Tanya Andersen beats the RIAA. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/12416>
- Newton, J. (2007, September 17). RIAA says No to Tanya Andersen. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/13341>
- Newton, J. (2008, February 22). Tanya Andersen RIAA complaint dismissed. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/15037>
- Newton, J. (2008, March 17). The RIAA vs Tanya Andersen story. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/15302>
- Newton, J. (2008, June 25). Pay Tanya Andersen \$108,000, judge orders RIAA. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/16213>
- Newton, J. (2008, July 7). RIAA RICO and ‘abuse of process’ case dismissed. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/16314>
- Newton, J. (2009, January 21). RIAA – deathly afraid of being mocked. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/18249>
- Newton, J. (2009, February 5). From one RIAA victim to another. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/18395>
- Newton, J. (2009, February 7). Dear RIAA: My name is Brittany Kruger. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/18413>
- Newton, J. (2009, May 11). Lying RIAA files more than 60 new cases. *p2pnet*. Retrieved March 1, 2011, from <http://www.p2pnet.net/story/21342>
- Newton, J. (2010, January 31). p2pnet RIAA Special, 2. *p2pnet*. Retrieved February 11, 2011, from <http://www.p2pnet.net/story/35016>
- Newton, J. (2010, March 31). Lawyers target 50,000 ‘movie downloaders’. *p2pnet*. Retrieved March 1, 2011, from <http://www.p2pnet.net/story/37514>
- Newton, J. (2010, May 27). Copyright Group gnomes attack Time Warner. *p2pnet*. Retrieved March 1, 2011, from <http://www.p2pnet.net/story/40050>
- Newton, J. (2010, December 29). Time Warner Cable vs Larry Flynt. *p2pnet*. Retrieved March 1, 2011, from <http://www.p2pnet.net/story/47302>

- Newton, J. (2011, February 1). Copyright troll drops flawed lawsuit. *p2pnet*. Retrieved March 1, 2011, from <http://www.p2pnet.net/story/48500>
- Noam, E. M. (2006). Deregulation and Market Concentration: An Analysis of Post-1996 Consolidations. *Federal Communications Law Journal*, 58(3), 539-550.
- Noble, D. F. (1977). *America By Design: Science, Technology, and the Rise of Corporate Capitalism*. New York, Oxford University Press.
- Not-so-Jolly Rogers. (2003, September 10). The Economist. Retrieved February 10, 2011, from http://www.economist.com/agenda/PrinterFriendly.cfm?Story_ID=2050467
- Olsen, S. (2003, October 6). Charter files suit against RIAA. *CNET*. Retrieved June 10, 2010, from http://news.cnet.com/2100-1027_3-5087304.html?tag=st_lh
- Olson, M. (1971). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, Mass., Harvard University Press.
- Oppenheim, M. (2010, September 24). Matthew Oppenheim on Damages in P2P Copyright Infringement Cases. *Copygrounds*. Retrieved February 11, 2011, from <http://copygrounds.com/2010/09/24/copyright-damages-in-p2p-cases/>
- Oram, A. (2001). Preface. *Peer-to-Peer: Harnessing the Power of Disruptive Technologies*. A. Oram. Cambridge, O'Reilly: vii-xv.
- Orlikowski, W. J. (1992). "The Duality of Technology: Rethinking the Concept of Technology in Organizations." *Organization Science* 3(3): pp. 398-427.
- Orlikowski, W. J. (2000). "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations." *Organization Science* 11(4): pp. 404-428.
- Orlikowski, W. (2007). "Sociomaterial Practices: Exploring Technology at Work." *Organization Studies* 28(9): pp. 1435-1448.
- Ortiz, S. (February 2011). Is Peer-to-Peer on the Decline? *Computer*, 44(2), pp. 11-13.
- Panzieri, R. (1976). Surplus value and planning: notes on the reading of "Capital". *The Labour Process & Class Strategies*. London, Stage 1 for the Conference of Socialist Economists.
- Paul, R. (2008, August 1). College funding bill passed with anti-P2P provisions intact .

- Arstechnica*. Retrieved February 7, 2011, from <http://arstechnica.com/tech-policy/news/2008/08/college-funding-bill-passed-with-anti-p2p-provisions-intact.ars>
- Penzenstadler, N. (2007, March 19). UW warns music sharers. *The Badger Herald*. Retrieved February 11, 2011, from http://badgerherald.com/news/2007/03/19/uw_warns_music_share.php
- Peoples, G. (2009, May 9). After the Fall. *Billboard*, 121(18).
- Phan, M. (2007, October 26). Oink Users Recall Defunct Song-Swap Site's Strange, Stringnet Rules. *Wired*. Retrieved March 1, 2011, from <http://www.wired.com/entertainment/music/news/2007/10/oink>
- Plant, A. (1974). The economic theory concerning patents for inventions (1934). *Selected Economic Essays and Addresses*. Boston, Routledge & Kegan Paul: pp. 35-56.
- Plant, A. (1974b). The economic aspects of copyright in books (1934). *Selected Economic Addresses and Essays*. Boston, Routledge & Kegan Paul: pp. 57-86.
- Plant, A. (1974c). The new commerce in ideas and intellectual property (1953). *Selected Economic Essays and Addresses*. Boston, Routledge & Kegan Paul: pp. 87-120.
- Postman, N. (1993). *Technopolopoly: The Surrender of Culture to Technology*. New York, Vintage Books.
- Pouwelse, J. A., Garbacki, P., Epema, D., & Sips, H. (2008). Pirates and Samaritans: A decade of measurements on peer production and their implications for net neutrality and copyright. *Telecommunications Policy*, 32(2008), pp. 701-712.
- Purdy, J. (1998). State of the Debate: The Chicago Acid Bath. *The American Prospect*. January 1.
- Rasti, A. H., Stutzbach, D., & Rejaie, R. (2006). On the Long-term Evolution of the Two-Tier Gnutella Overlay. Paper presented at the *INFOCOM 2006. 25th IEEE International Conference on Computer Communications*. Retrieved March 1, 2011, from <http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=4146652>
- Ravid, S. A. (2005). Film Production in the Digital Age--What Do We Know about the Past and the Future? In C. C. Moul (Ed.), *A Concise Handbook of Movie Industry Economics* (pp. 32-58). New York: Cambridge University Press.
- Read, B. (2007, October 19). Congress Again Tries to Get Colleges to Curb Computer

- Piracy. *The Chronicle of Higher Education*. Retrieved February 11, 2011, from <http://wiredcampus.chronicle.com/article/Congress-Again-Tries-to-Get/14214/>
- Reaves, T. (2007, March 26). UMS refuses to hand student info to RIAA. *The Maine Campus*. Retrieved February 11, 2011, from <http://mainecampus.com/2007/03/26/ums-refuses-to-hand-student-info-to-riaa/>
- Reid, E. (1999). Hierarchy and power: social control in cyberspace. *Communities in Cyberspace*. M. A. Smith and P. Kollock. New York City, Routledge: pp. 107-133.
- Rheingold, H. (2000). *The virtual community: homesteading on the electronic frontier* (Rev. ed.). Cambridge, Mass.: MIT Press.
- RIAA. (2003, September 8). Recording Industry Begins Suing P2P File-sharers Who Illegally Offer Copyrighted Music Online. Retrieved February 10, 2011, from http://www.riaa.com/newsitem.php?news_year_filter=2003&resultpage=6&id=85183A9C-28F4-19CE-BDE6-F48E206CE8A1
- RIAA. (2007, February 28). RIAA LAUNCHES NEW INITIATIVES TARGETING CAMPUS MUSIC THEFT. Retrieved February 7, 2011, from http://www.riaa.org/newsitem.php?news_year_filter=2007&resultpage=5&id=0BB7A35D-544B-2DD2-F374-4F680D6BAE9B
- RIAA. (2007, March 21). MUSIC THEFT AT 23 CAMPUSES TARGETED IN SECOND WAVE OF NEW DETERRENCE PROGRAM. Retrieved February 8, 2011, from http://www.riaa.org/newsitem.php?news_year_filter=2007&resultpage=4&id=B3196098-01D3-FCD7-E97E-E8F8384E4986
- RIAA. (2007, April 11). RIAA PRE-LAWSUIT LETTERS GO TO 22 CAMPUSES IN NEW WAVE OF DETERRENCE PROGRAM. Retrieved February 8, 2011, from http://www.riaa.org/newsitem.php?news_year_filter=2007&resultpage=3&id=7408966D-245D-A17D-4869-C0DB1E7ADA97
- RIAA. (2007, May 02). NEW WAVE OF RIAA PRE-LAWSUIT LETTERS TARGETS MUSIC THEFT ON 13 CAMPUSES. Retrieved February 7, 2011, from http://www.riaa.org/newsitem.php?news_year_filter=2007&resultpage=2&id=C2476AFF-A70F-0567-76C2-FC3ECE93D8E
- RIAA. (2007, June 8). MUSIC THEFT ON 19 CAMPUSES TARGETED IN WAVE OF RIAA PRE-LAWSUIT LETTERS. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=6&news_year_filter=2007&resultpage=&id=7710D405-A886-F768-B8AD-EBC0E4831DD1

- RIAA. (2007, July 18). 23 NEW SCHOOLS TO RECEIVE LATEST ROUND OF RIAA PRE-LAWSUIT LETTERS. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=7&news_year_filter=2007&resultpage=&id=780E8751-0E03-4258-D651-F991B66E1708
- RIAA. (2007, August 16). MUSIC THEFT AT 58 CAMPUSES TARGETED IN LATEST WAVE OF DETERRENCE PROGRAM. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=8&news_year_filter=2007&resultpage=&id=8F561EB9-6C3D-D867-324D-18882703F7C2
- RIAA. (2007, September 20). RIAA SENDS MORE LAW PRE-LAWSUIT LETTERS TO COLLEGES WITH NEW SCHOOL YEAR. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=9&news_year_filter=2007&resultpage=&id=36CA9067-8061-3114-41BB-491B8B32A357
- RIAA. (2007, October 18). PRE-LAWSUIT LETTERS SENT IN NEW WAVE TARGETING MUSIC THEFT ON 19 CAMPUSES. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=10&news_year_filter=2007&resultpage=&id=E549F223-3648-E92C-0CA2-7BFAFC2DB352
- RIAA. (2007, November 15). NEW WAVE OF PRE-LAWSUIT LETTERS TARGETS MUSIC THEFT ON 16 CAMPUSES. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=11&news_year_filter=2007&resultpage=&id=E9266037-DD38-CE56-0D30-6FD0D60CD44A
- RIAA. (2007, December 6). RIAA PRE- LAWSUIT LETTERS GO TO 22 CAMPUSES IN NEW WAVE OF DETERRENCE PROGRAM. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=12&news_year_filter=2007&resultpage=&id=8E8AE31D-2CD9-5E90-8892-5FEBD3A603B9
- RIAA. (2008, January 10). RIAA CONTINUES COLLEGE DETERRENCE CAMPAIGN INTO 2008. Retrieved February 11, 2011, from http://www.riaa.org/newsitem.php?news_month_filter=1&news_year_filter=2008&resultpage=&id=36720A8F-FF55-2886-C2A2-EAB629C662BD
- RIAA. (2008, February 21). RIAA SENDS MORE PRE-LAWSUIT LETTERS TO COLLEGES ONE YEAR INTO CAMPAIGN. Retrieved February 11, 2011, from

- http://www.riaa.org/newsitem.php?news_month_filter=2&news_year_filter=2008&resultpage=&id=B0FAEEC1-A56A-0F04-D999-94A807ADAA6E
- RIAA Drops Another Case In Chicago Against Misidentified Defendant (2007, May 3). *Recording Industry vs The People*. Retrieved February 7, 2011, from <http://recordingindustryvspeople.blogspot.com/2007/05/riaa-drops-another-case-in-chicago.html>
- RIAA Drops Wilke Case in Chicago (2006, October 13). *Recording Industry vs The People*. Retrieved February 7, 2011, from <http://recordingindustryvspeople.blogspot.com/2006/10/riaa-drops-wilke-case-in-chicago.html>
- Roach, R. (2007). Music Industry Group Resumes Anti-Piracy Campaign On College Campuses. *Diverse: Issues in Higher Education*, 24(18).
- Roberts, P. (2004, January 21). RIAA Sues 532 'John Does'. *PCWorld*. Retrieved February 11, 2011, from http://www.pcworld.com/article/114387/riaa_sues_532_john_does.html
- Roettgers, J. (2011, January 14). P2P Lawsuits Gone Wild. Gigaom.com. Retrieved March 11, 2011, from <http://gigaom.com/video/p2p-lawsuits-gone-wild/>
- Rose, D., Mechlovitz-Rosen, S., Seigel, B., & Sangha, S. (2003, September 10). Brianna Pays the Piper Apology & 2G settle music suit. *Daily News* (New York).
- Roth, D., & Ryan, O. (2005, October 31). Torrential Reign. *Fortune*, 152(9).
- Saltzman, J. (2009, April 8). To noted lawyer, it's an open and shout case: Offbeat tactics in music-sharing suit stun peers. *Boston Globe*. Retrieved February 11, 2011, from http://www.boston.com/news/local/massachusetts/articles/2009/04/08/to_noted_lawyer_its_an_open_and_shout_case/?page=full
- Saltzman, J. (2009, December 7). Judge won't stop student from promoting illegal downloading. *Boston Globe*. Retrieved February 11, 2011, from http://www.boston.com/news/local/breaking_news/2009/12/judge_wont_stop.html
- Samuelson, P. A. (1964). *Economics: An Introductory Analysis*. New York: McGraw-Hill Book Company.
- Sandoval, G. (2010, January 22). Judge lowers Jammie Thomas' piracy penalty. *CNET*.

- Retrieved August 30, 2010, from http://news.cnet.com/8301-31001_3-10439636-261.html
- Sandoval, G. (2010, January 25). RIAA in pickle over Jammie Thomas ruling. *CNET*. Retrieved August 30, 2010, from http://news.cnet.com/8301-31001_3-10440602-261.html
- Sandoval, G. (2010, May 12). 'Hurt Locker' producers follow RIAA footsteps. *CNET*. Retrieved March 1, 2011, from http://news.cnet.com/8301-31001_3-20004860-261.html
- Sandoval, G. (2010, June 22). Biden to file-sharers: 'Piracy is theft'. *CNET*. Retrieved March 1, 2011, from http://news.cnet.com/8301-31001_3-20008432-261.html
- Sandoval, G. (2010, September 20). Lawmakers want power to shut down 'pirate sites'. *CNET*. Retrieved March 1, 2011, from http://news.cnet.com/8301-31001_3-20016995-261.html
- Sandoval, G. (2010, December 2). Google to do more piracy fighting with search. *CNET*. Retrieved March 1, 2011, from http://news.cnet.com/8301-31001_3-20024408-261.html
- Sangha, S., Furman, P., & Gearty, R. (2003, September 9). Sued for a Song N.Y.C. 12-yr-old among 261 cited as sharers. *Daily News* (New York).
- Schwartz, J. (2003, September 25). She Says She's No Music Pirate. No Snoop Fan, Either. *New York Times*. Retrieved February 10, 2011, from <http://www.nytimes.com/2003/09/25/business/media/25TUNE.html?ex=1098849600&en=6960e36>
- Schwartz, J. (2004, January 21). Recording Industry Is Accusing 532 People of Music Piracy. *New York Times*. February 10, 2011, from <http://www.nytimes.com/2004/01/21/business/21WIRE-MUSIC.html?ex=1098849600&en=6fbab6ab32a03237&ei=5070&hp>
- Scott, J. C. (1977). *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven: Yale University Press.
- Sell, S. K. (2003). *Private power, public law: the globalization of intellectual property rights*. Cambridge, U.K. ; New York: Cambridge University Press.
- Sewell Jr., W. H. (1992). A Theory of Structure: Duality, Agency, and Transformation. *The American Journal of Sociology*, 98(1), pp. 1-29.

- Shapiro, M. S. (2003). The International Copyright System. In *Copyright and Consequences: Central European and U.S. Perspectives* (pp. 15-36). Cresskill, NJ: Hampton Press.
- Sheffner, B. (2009, July 31). Oy Tenenbaum! RIAA wins \$675,000 or \$22,500 per song. *Arstechnica*. Retrieved August 30, 2010, from <http://arstechnica.com/tech-policy/news/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song.ars>
- Sheffner, B. (2010, August 6). Due Process Limits On Statutory Civil Damages? Unprecedented Ruling in Copyright Case a Double-Edged Sword For Business. *Washington Legal Foundation*, 25(4). Retrieved August 30, 2010, from http://www.wlf.org/publishing/publication_detail.asp?id=2189
- Shirky, C. (2001). Listening to Napster. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 21-37). Cambridge: O'Reilly.
- SlyckTom. (2006, May 5). BearShare Settles for \$30 Million. *Slyck*. Retrieved February 11, 2011, from <http://www.slyck.com/forums/viewtopic.php?t=22181>
- Smith, D. E. (2006). *Institutional ethnography as practice*. Lanham, Md.: Rowman & Littlefield.
- Smythe, D. (1977). Communications: Blindspot of Western Marxism. *Canadian Journal of Political and Social Theory*, 1(3): p. 26.
- Smythe, D. W. (1978). "Rejoinder to Graham Murdock." *Canadian Journal of Political and Social Theory*, 2(2): pp. 120-127.
- Smythe, D. W. (2001). On the Audience Commodity and its Work. *Media and Cultural Studies Keywords*. M. G. Durham and D. M. Kellner. Malden, MA, Blackwell Publishing Ltd.: pp. 253-279.
- Staggenborg, S. (2010). *Social Movements*. New York, Oxford University Press.
- Starr, P. (2004). *The creation of the media: political origins of modern communications*. New York: Basic Books.
- Stein, L. (2006). *Speech Rights in America: The First Amendment, Democracy, and the Media*. Chicago, University of Illinois Press.
- Svensson, P. (2007, October 19). Comcast blocks some Internet traffic. *Associated Press*. Retrieved November 1, 2008, from <http://www.msnbc.msn.com/id/21376597/>
- Taylor, I. J. (2005). *From P2P to Web Services and Grids: Peers in a Client/Server*

- World*. London: Springer.
- Tenenbaum, J. (2009, July 27). How it feels to be sued for \$4.5m. *The Guardian*. Retrieved February 11, 2011, from <http://www.guardian.co.uk/music/musicblog/2009/jul/27/filessharing-music-industry>
- Terranova, T. (2004). *Network culture: politics for the information age*. London ; Ann Arbor, MI: Pluto Press.
- Thompson, C. (2005, January). The BitTorrent Effect. *Wired*. Retrieved March 1, 2011, from <http://www.wired.com/wired/archive/13.01/bittorrent.html>
- Thompson, E. P. (1971). The Moral Economy of the English Crowd in the Eighteenth Century. *Past & Present*, 50(Feb.), pp. 76-136.
- Timmer, J. (2008, September 5). Michigan law passed requiring MediaSentry to have PI license. *Arstechnica*. Retrieved February 11, 2011, from <http://arstechnica.com/tech-policy/news/2008/09/michigan-law-passed-requiring-mediasentry-to-have-pi-license.ars>
- Triplett, W. (2007, May 2). Congress threatens colleges: Politicians try campus quiz on piracy. *Variety*. Retrieved February 7, 2011, from <http://www.variety.com/article/VR1117964133?refCatId=18>
- Tronti, M. (1971). *Operai e capital* (2nd ed.). Turin: Einaudi.
- Tsoumakos, D., & Roussopoulos, N. (2003). A Comparison of Peer-to-Peer Search Methods. Paper presented at the International Workshop on the Web and Databases.
- Turner, G. (2006). *Film as Social Practice*. New York: Routledge.
- Unger, R. (1986). *The Critical Legal Studies Movement*. Cambridge, MA: Harvard University Press.
- Vaidhyanathan, S. (2001). *Copyrights and copywrongs: the rise of intellectual property and how it threatens creativity*. New York: New York University Press.
- Vaidhyanathan, S. (2003). The New Information Ecosystem, parts 1-4. *Open Democracy*. Retrieved May 20, 2010, from http://www.opendemocracy.net/theme_9-informationwar/article_1319.jsp
- Vogel, H. L. (2005). Movie Industry Accounting. In C. C. Moul (Ed.), *A Concise*

- Handbook of Movie Industry Economics* (pp. 59-79). New York: Cambridge University Press.
- Waldman, M., Cranor, L. F., & Rubin, A. (2001). Publius. In A. Oram (Ed.), *Peer-to-Peer: Harnessing the Power of Disruptive Technologies* (pp. 145-158). Cambridge: O'Reilly.
- Wellman, B., & Gulia, M. (1999). Virtual communities as communities: Net surfers don't ride alone. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace* (pp. 167-194). New York City: Routledge.
- Wilbur, S. P. (1995). An Archeology of Cyberspaces: Community, Virtuality, Mediation, Commerce . *The Cyberpunk Project*. Retrieved March 1, 2011, from http://project.cyberpunk.ru/idb/archeology_of_cyberspace.html
- Wilkowske, T. and S. Decker (2009, June 19) Vivendi Wins \$1.9 Million Award From Woman Who Swapped Songs. *Bloomberg*. Retrieved June 21, 2009, from <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a9y16zokxk90#>
- Willson, M. (2001). Community With(out) Others. *Mots Pluriels et Grands Themes de Notre Temps*, 18, pp. 1-8.
- Winston, B. (1998). *Media Technology and Society: A History: From the Telegraph to the Internet*. New York: Routledge.
- Woo, J. (2000). *Copyright Law and Computer Programs: The Role of Communication in Legal Structure*. New York: Garland Publishing, Inc.
- Wosko, J. (2005). Critiquing Hollywood: The Political Economy of Motion Pictures. In C. C. Moul (Ed.), *A Concise Handbook of Movie Industry Economics*. New York: Cambridge University Press.
- Wright, S. (2002). *Storming heaven: class composition and struggle in Italian autonomist Marxism*. London: Sterling, Va., Pluto Press.
- Xia, R. L., & Muppala, J. K. (2010). A Survey of BitTorrent Performance. *IEEE Communications Survey and Tutorials*, 12(2).
- Yu, J., Li, M., Hong, F., & Xue, G. (2006). Free-Riding Analysis of BitTorrent-like Peer-to-Peer Networks. Paper presented at the IEEE Asia-Pacific Conference on Services Computing.