



Survey of File-Sharing Culture

BRETT ROBERT CARAWAY
University of Texas at Austin

This paper attempts to go beyond the typical assessments of file-sharing as either an unlawful activity or a market imperfection by demonstrating that the trajectory of capitalist development in the sphere of information production and distribution is conditioned by a social system of commoning. To that end, this exploratory research begins the process of mapping the intersections of the social structures implicated in the activity of file-sharing by surveying a group of file-sharers. The article concludes by arguing that the antagonisms produced by competing visions for the social relations implicated in the production and distribution of informational and cultural goods in the networked environment should be incorporated into future analysis of file-sharing.

In the summer of 2003, the Recording Industry Association of America (RIAA) announced the launch of an unprecedented litigation campaign targeting individual peer-to-peer (P2P) file-sharers in the United States. Over the next five years, the RIAA sued more than 30,000 people in U.S. District Courts for alleged acts of copyright infringement while using P2P networks like Kazaa and Gnutella (Beckerman, 2008). After the RIAA abandoned its litigation campaign in 2008, numerous other media groups followed suit. In 2010, approximately 100,000 BitTorrent users were targeted in the United States by lawyers representing a collection of pornographic and independent film studios (Moya, 2011b). In the United Kingdom, similar tactics were pursued by the legal organization ACS:Law. In Germany, approximately 575,000 individuals were targeted, according to a recent estimate (Roettgers, 2011). These examples sit alongside other litigation and police actions against websites and P2P platforms as part of a coordinated global attack on file-sharing culture.

Our current understanding of the social dimensions of file-sharing is inadequate. In some sense, the term "piracy" camouflages the complex structural foundation of file-sharing activities. Discourse about file-sharing generally falls into two categories: *criminality* or *missing markets*. The European Union has defined piracy as whatever the knowledge industry needs protection from (Johns, 2009). And in the United States, Vice President Biden recently weighed in on file-sharing by stating that "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). Yet even a cursory examination reveals that it is not clean and simple. The nonrival character of the artifacts being shared exposes the speciousness of Vice President

Brett Robert Caraway: brettcaraway@mail.utexas.edu

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Biden's metaphor. Far from being an antisocial behavior, file-sharing is a richly social and complex activity.

Some academic discourses on file-sharing have adopted a different framing in which file-sharing appears as the result of an unexpected turn in consumer demand. This is essentially Shirky's (2001) position: He downplays the *civil disobedience* of Napster users by arguing that file-sharing does not constitute a rejection of the pricing system, but rather, a demand for lower prices. It is also the position of Cenite, Wang, Peiwen, and Chan (2009), who argue that 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 lies not in what they say, but in what they don't say. By naturalizing the market form, these approaches explain file-sharing as some sort of aberration. The structural dimension of P2P systems is largely ignored, as is the constitution of social relations premised on something radically different from market relations. Confronting file-sharing as a market imperfection both obscures the antagonisms produced by social relations premised on commodity exchange and forecloses the possibility of truly alternative social relations.

In order to broaden the analytical horizon of our approach to file-sharing, this study confronts its subject as a set of alternative social relations premised on a *commoning* of resources.¹ As such, file-sharing is analyzed as a possible articulation of an alternative form of social relations associated with the ascension of immaterial labor within the economy as a whole. Immaterial labor, which produces the informational and cultural content of commodities, entails new forms of cooperative social arrangements among people. These new social relations have been facilitated by recent technological developments which allow for the production and maintenance of commons of informational and cultural artifacts in networked environments (Lazzarato, 1996). Production increasingly involves social arrangements in which generalized human interaction produces the cultural knowledge, language, code, and information necessary to sustain accumulation. Accordingly, a stage in the development of the productive forces has been reached wherein there exists a potential for crises in the processes of commodification, as avenues of exit from social relations premised on economic exchange have become increasingly feasible. And because these alternative social relations threaten the continuity of commodity exchange, firms are sometimes compelled to mobilize police and legal resources against the emerging commons. Therefore, this study incorporates antagonism as a significant structural dimension of file-sharing communities. 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 communities. I begin with a brief discussion of the theoretical framework and methodology adopted in this study. After reviewing the sample of file-sharers, I continue with a discussion of the results of the survey. In the conclusion, I propose that antagonism is a significant component of file-sharing communities and that it may be understood as a product of a conflict between two contradictory social systems—one based on commodification, and the other based on commoning.

¹ I borrow the term *commoning* from Peter Linebaugh (2008) to emphasize the active reproduction of commons.

Research Design

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 class antagonism influences the eventual trajectory of capitalist development in this particular area. In keeping with Hardt and Negri's (2009) work on the commons, I approach file-sharing as a demonstration of the paradoxical tendency of capital to produce commons despite its continuing drive to privatize resources. The authors 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. (ibid., p.10)

These commons are not exterior to capitalism. They are at its heart. And confronted with such an intimate paradox, capitalists are presented with but two choices: destroy the commons, or bring it within the logic of accumulation. Litigation and law enforcement efforts against file-sharers represent the former choice, while calls to create new business models respecting the 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 destiny. Indeed, according to the Cisco Visual Networking Index, the volume of P2P 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 P2P systems. However, I wish to avoid the objectivism/subjectivism dichotomy common to many investigations of the structural properties of social systems. Therefore, I employ Giddens's (1986) *structuration theory* to conceptualize the structures of P2P systems as the *rules and resources* recursively implicated in the reproduction of file-sharing communities. Hence, file-sharing is seen not as the simple product of technological development or market imperatives, but as a social system relying on shared meanings and materials for the co-ordination and reproduction of file-sharing activities. Also in keeping with Giddens, I consider file-sharers to be knowledgeable social actors capable of furthering our understanding of the conditions under which their activities occur.

Respondents

I utilized survey research to gather data from a population of file-sharers with the help of a number of individuals from various file-sharing communities. These individuals are in charge of assorted file-sharing fora, IRC channels, and private BitTorrent sites. Though the total number of file-sharers is difficult to gauge, BitTorrent claims 100 million worldwide monthly users and 20 million daily active users (Moya, 2011a). This sample of 363 file-sharers is representative primarily of BitTorrent users from developed countries. As this study is *exploratory* in intent, these findings should not be read as

generalizable to the vast universe of file-sharing. It is my intent here only to begin the process of identifying those structures which condition file-sharing activities. Respondents ranged in age ($n = 356$) from 13 to 65 years, with the largest group being in their twenties (48%), the next largest in their teens (18.3%), and the next largest in their thirties (18%). People over the age of 40 made up 15.7% of the sample. Respondents came from over 42 countries ($n = 346$).² The five largest groups came from the United States (39.6%), the United Kingdom (15.03%), Canada (9.3%), Australia (5.5%), and Finland (3.8%). 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, and a retired airline operations officer. I modified the *Standard Occupational Classification System* used by the United States Department of Labor to create Table 1.

Table 1. 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
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

² The number of responses for each question varies somewhat as respondents elected not to answer some questions.

Building/Grounds Maintenance & Cleaning	1	0.3
Stay-at-home Parent	1	0.3
Real Estate	1	0.3

While the majority of respondents appear to either be students or working within high tech and media industries, substantial numbers came from other fields. A significant number were unemployed. Respondents had varying levels of experience with file-sharing applications. Of those who answered ($n = 362$), 27.3% had more than 10 years of experience, 40.6% had 6–10 years of experience, 27% had 3–5 years of experience, and 5% had less than 2 years of experience.

The Survey

Why Do You Use P2P Applications to Acquire Music, Movies, or Television Programs?

When asked to explain why they use P2P applications to acquire content, respondents ($n = 357$) provided a variety of reasons represented by the 15 general categories in Table 2.

Table 2. Reasons For Using P2P Applications ($n = 357$).

Reason	Number	Percentage
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 respondents alluded to economic factors as a reason for using P2P applications. They cited unemployment, financial hardship, and the high cost of content. A sizeable portion of respondents (47.9%) stated that their motivation stemmed from the higher quality offered by P2P systems. They cited things like higher quality file formats, better selection, more reliable and faster content distribution, the ease-of-use of P2P platforms, and the availability of special features like language options. Many respondents (33.9%) also pointed to the unavailability of content in local

markets as a motivation. There were expatriates from Western nations and those who simply desired access to content produced in foreign countries. A substantial portion of respondents (19.9%) asserted that they wanted to *preview* content before deciding whether or not to purchase it. Many respondents (9.5%) also mentioned *format-shifting* as a motivation. This category typically included some expression of dissatisfaction with digital rights management (DRM) systems and a desire to move content across various playback and storage devices. A closely related category to *format-shifting* was *time-shifting*, constituted by the 12.6% of respondents who also expressed dissatisfaction with DRM and a desire for on-demand and unlimited playback of content. Another 11.5% of respondents indicated a desire to *avoid advertisements* or other unskippable content. There were also those who wanted an *à la carte selection* (songs, not albums; episodes, not series) scheme for more control over their purchases (3.6%). Still others wanted access to *out-of-print* content (8.1%) and *pre-release content* (1.1%).

The categories enumerated thus far would seem to support the contention that file-sharing is primarily a manifestation of a market imperfection. Yet other responses would seem to suggest dynamics not captured in the language of market analysis. A fairly significant portion of respondents (16.8%) referenced *political motivations* for using P2P systems. These included references to litigation and police actions targeting file-sharers and P2P websites, as well as a desire to boycott corporate content providers. Respondents argued that, since artists are not treated fairly by the recording industry, there is little incentive to purchase from authorized sources. A small portion of respondents (1.7%) stated that their use of P2P systems had been conditioned by *previous experience* with other P2P technology. That is to say, they used P2P because it was what they had grown accustomed to. Here, we can begin to detect the growing gap between the quickly-developing cultural habits of file-sharers and the institutional inertia of the old industrial economy. Interestingly, an explicit desire to *share content* was cited by 8.7% of respondents as a motivation. Respondents spoke of their enjoyment of the communities of file-sharers, their delight in teaching and helping others, the inherent naturalness of sharing among humans, and the pleasures 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 process of discovery back to sharing, which they argued was a more effective means of content distribution. A small number of respondents (0.8%) cited their desire to utilize P2P networks to share *public domain, open source, and Creative Commons* content.

How Should Musicians Feel About File-Sharing?

This question gave respondents ($n = 293$) a chance to reflect on the relationship between musicians and file-sharing. The intent was to gauge whether or not file-sharers identified with musicians and how they thought their file-sharing activities impacted them. An overwhelming majority of respondents (74.4%) indicated that musicians should welcome the advent of file-sharing as a new platform for promotion and distribution. Many referred to the decentralized nature of P2P and its democratizing potential for smaller and independent artists. In this sense, P2P was seen, alongside digital audio workstations and cheap personal computers, as one in a suite of new tools allowing artists to take advantage of opportunities for dramatically lowered fixed and marginal costs. A 20-year-old student from the Netherlands commented:

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.

Similarly, a 42-year-old studio technician from the UK explained the relation between fandom and promotion thusly:

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%) argued that file-sharing was a useful *indicator of fan approval* for artists, and that musicians should see file-sharing as a type of adulation. For example, a 20-year-old student from the Middle East asserted:

[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 from the United States who argued:

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.

Other respondents (6.1%) argued that file-sharing can be used as part of a new business model based on *donations*. 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 relation between file-sharing and musicians. A portion of the responses (8.2%) indicated some concern that file-sharing could potentially result in lost sales for artists. As one 19-year-old student from Bangladesh responded:

[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%) seemed to make a distinction that *established artists* would be disproportionately impacted by file-sharing because of their reliance on outmoded business models. An unemployed 24-year-old from the UK 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 file-sharing. 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-file-sharing 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.

In general, these file-sharers believe that P2P systems afford more opportunity than was available in the past, and to a greater number of musicians. Rather than a threat to musicians' livelihoods, respondents seem to view their own activities as a form of free labor in the service of musicians. As a 25-year-old software developer from Russia put it when asked how musicians should feel about file-sharing:

The same way flowers feel about bees.

*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 give respondents a forum to express their views about an industry that has targeted them for the better part of a decade. I received 278 responses to this question. Even though a strong response by survey participants was not altogether unexpected, it is worth noting that not a single respondent made a strong case on behalf of the industry's good intentions for either musicians or fans. Where respondents were willing to acknowledge concern by the record labels and RIAA,

it was contingent on the industry's own economic well-being. For example, a 22-year-old U.S. soldier 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 from the Czech Republic, who had this to say:

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 acquired by the RIAA during its litigation campaign found its way into the hands of musicians was a recurring theme. A 21-year-old student 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.

Many of these responses emphasized the economic exploitation of musicians. A 23-year-old student from the United States typified this sentiment:

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.

There was also little sympathy for the music industry when it came to the treatment of music fans. An unemployed 24-year-old from the UK protested:

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 were plenty of diatribes against the industry. The antagonism runs deep. But the anger is directed specifically at the industry—not the musicians. In general, these respondents identified with musicians. This identification with musicians and their music is significant, in that, to some degree, respondents view themselves as the *stewards of valuable cultural artifacts*—a role in which they feel the industry has failed. As the above quotation argues, *the artist and the record company must be separated for the cultural common good*.

Do You Consider People Who Share Copyrighted Materials over P2P Networks to be Criminals?

This question required respondents to respond to a negative characterization of their social worth. I received 276 responses, the majority of which scoffed at the notion of criminality. A small number of respondents admitted that, while file-sharing may technically run afoul of copyright law, it was a minor offense unworthy of such a serious label. They drew comparisons between file-sharing and minor offenses like jaywalking, speeding, running red lights, or an assortment of victimless crimes. As an 18-year-old student from Belgium commented:

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.

Others responded that *theft* was a poor metaphor used to advance the argument of *lost sales*, in which the industry regularly asserts that each P2P download represents a lost sale. Another common response emphasized the non-commercial nature of file-sharing. As long as individual file-sharers were not profiting from their activities, there would not be anything immoral about it. For example, a 22-year-old student from the United States responded:

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.

The notion of public goods theory and the nonrival character of information commodities figured prominently (if somewhat obliquely) in some responses. As one 27-year-old artist from Germany concluded:

How can I steal something that cannot be owned?

Other responses emphasized the growing gap between law and cultural practices conditioned by recent technological development. The basic premise 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 in the United States asserted the following:

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.

Or, as a 20-year-old security guard from Canada proclaimed:

No. It's civil disobedience. We can't abide by unjust laws. We have a right to information.

Some felt that the idea of criminality was more appropriately applied to the industry and its allies in government. As an unemployed 24-year-old file-sharer from the UK decried:

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 goddam legislation and telling our lawmakers to do as their told and pass it). Who the FUCK do they think they are?

Still others responded to the term *criminal* by arguing that, to the contrary, their actions were, if anything, socially desirable. Whereas criminality implies some antisocial behavior, *sharing* was beneficial and should be encouraged. As a 32-year-old file-sharer from Belgium colorfully 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 file-sharing a crime is still beyond me.

Ultimately, the majority of respondents seemed uncomfortable with, if not totally opposed to, the criminal label. One 25-year-old German file-sharer invoked a German word satirizing the discourse: *Raubmordkopierer*. Roughly translated, it means *burglar-murderer-copier*. A 32-year-old media manager from Finland offered some alternative monikers in place of "criminal" or "pirate": *trailblazers, pioneers, necessary deviants, revolutionaries*.

*How Do You Learn the Necessary Skills to be a File-Sharer?
What Resources Do File-Sharers Have at Their Disposal?*

Because file-sharing involves more than the handful of available P2P applications, these questions attempted to uncover the structures which are directly implicated in the practice itself. File-sharers rely on a range of resources to coordinate their activities, and respondents were invited to reveal these resources. I received 277 responses and organized them into the following five categories.

(1) Common Web Resources

The most striking aspect of these resources is their abundance and ubiquity. A 45-year-old unemployed file-sharer in the United States vividly explained:

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.

Respondents indicated that the learning curve associated with file-sharing is negligible. Applications have become increasingly easy to use, and there exists a wealth of online tutorials. *Google is your friend* was a common mantra among respondents. 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 respondents as good sources for tutorials and general information, as were the *FAQs* provided by many P2P application developers on their own websites. Evidently, there are no high barriers to entry into the world of file-sharing.

(2) General Tracker and Index Sites

Unlike previous generations of file-sharing applications, BitTorrent users are saddled with the additional chore of figuring out how to locate content without the benefit of a built-in search function. Yet here, too, there are abundant resources. Indexes are maintained by numerous websites for BitTorrent users to search for content. *Indexing* is not to be confused with another BitTorrent function known as *tracking*. Tracker websites facilitate communication between peers attempting to access the same content. In practice, websites often 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 perhaps the best known example of a BitTorrent index.³ [IsoHunt](#) and [Demonoid](#) are two other examples of celebrated BitTorrent trackers. 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. There are also master indexes of these sites for users to consult, such as [torrentresource.com](#).

(3) Dedicated P2P 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 and editorials, and tutorials, all dedicated to the topic of file-sharing. For example, [Zeropaid.com](#) is a website launched in 2000 that provides news and discussion forums on topics related to P2P, as well as a host of software applications to assist users in everything from playback to format-shifting. Also launched in 2000, [Slyck.com](#) is another website providing news, reviews, editorials, and a discussion forum. [p2pnet.net](#) is a news website dedicated to covering stories involving file-sharing. And launched in 2005, [TorrentFreak.com](#) is a blog dedicated to providing readers with news, tutorials, and other useful file-sharing information. There are, no doubt, many more of these sites.

(4) Anonymity

File-sharers use a variety of resources to mask their activities. For example, many 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 by encrypting information transmitted between two networked devices which are not on the same private network, obscuring these transmissions from intermediate networks. File-sharers also use *seedboxes* to hide their activities. A seedbox is a dedicated private server that allows file-sharers to remotely control a P2P 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 in an attempt to conceal IP addresses in the process of file-sharing. Another application cited by respondents is the open source program *PeerBlock*. This software blocks packets originating from lists of host addresses. The lists are updated frequently 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 restricted to members who have registered with the site, usually 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 that has come about as BitTorrent users adapt to increased threat levels. One of the first of these private sites was *Oink.cd*, which was established in 2004

³ At one time, The Pirate Bay also functioned as a tracker, but the site discontinued those services in late 2009 (Mennecke, 2009).

before being shut down in 2007 by British and Dutch authorities following an investigation by the International Federation of the Phonographic Industry (Phan, 2007). 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, thebox.bz is dedicated to British television shows, blackcats-games.net is dedicated to games, and bakabt.com is dedicated to anime. The role of private trackers is increasingly central to both the coordination of file-sharing activity and the sense of community among file-sharers. As a 24-year-old unemployed file-sharer in the UK explained:

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.

Is There a Community of P2P File-Sharers?

This question invited respondents to further consider the social aspects of file-sharing. There was no formal definition of *community* provided for respondents, as the intent was exploratory in nature. A total of 267 responses were received, out of which only 15 (5.6%) definitively ruled out the possibility of a community of file-sharers. For example, a 40-year-old self-employed file-sharer from Canada dismissed the notion of community by invoking BitTorrent's structural design 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 function of BitTorrent clients. For example, a 32-year-old student 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 qualified their belief in a community of file-sharers by drawing a distinction between active and non-active members. Others were hesitant to speak of a single 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 UK stated the following:

"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.

Respondents were also keen to point out that there is considerable variation in these smaller communities from forum to forum, site to site, and platform to platform. They emphasized the shared interests of smaller communities as providing a degree of social cohesion. A 39-year-old file-sharer from the United States spoke of a private community dedicated to comic books and commented on the devotion of enthusiasts who scan and preserve old and obscure comics. A 25-year-old technician from the United States spoke of a community of file-sharers known as *fansubs* who are dedicated to the translation of anime. And a 20-year-old student from the United States spoke of the American-based fans of *Dr. Who*, and of how they have no way of accessing the program except through their collective efforts as file-sharers. It is here that we find the true stewards of cultural artifacts. It may be tempting to dismiss the social cohesion resulting from these shared interests as shallow. However, as a 41-year-old financial analyst from the United States argued, 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? Some respondents seemed to imply as much. Consider the comments of a 26-year-old file-sharer from the United States:

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:

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 file-sharing communities. And this tradition of free and decentralized access occasionally spills out of file-sharing communities and manifests as the collective action of groups like *Piratpartiet* and *Anonymous*. The ethic of sharing provides a framework of social cohesion onto which a multitude of communities of shared interests can be grafted. Or, as one unemployed 34-year-old Canadian file-sharer stated in a clever play on Richard Stallman's famous statement:

There is a community, free—as in beer—holds it together.

What Has Been the Effect of the RIAA Lawsuits Targeting Individual File-Sharers?

This final question asked respondents to reflect on the impact of file-sharing litigation. Considering the diversity of the nationalities of respondents, the question would have been better worded had it not emphasized a U.S. trade organization. Nevertheless, there were 275 responses illuminating the impact of these legal actions on file-sharing communities.

By far, the largest category (53.1%) included those responses indicating that the litigation had minimal impact. These ranged from those which asserted no discernable effect at all to those which argued the litigation had likely increased the amount of file-sharing. As a 22-year-old soldier from the United States 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.

In addition to the problem of sheer numbers, respondents indicated that, as long as there was a demand for better terms of access to content, file-sharing would thrive. For example, a 34-year-old financial analyst from Australia argued the following:

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.

Others felt that, as younger generations became acclimated to file-sharing, the trend would be increasingly difficult to reverse (5.5%). In fact, there were those who felt that litigation had likely achieved the exact opposite of deterrence by raising awareness of file-sharing. A 36-year-old programmer 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.

Some responses (12.4%) indicated that an effect of the litigation was the failure of the content industries to develop a viable business model. A 34-year-old PC technician from the United States typified this position in stating the following:

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.

The call for a new business model is simultaneously a call for firms to bring file-sharing within the logic of accumulation and a recognition of the failure to eradicate the commons. However, there was a portion of the responses (13.1%) which acknowledged some limited success of the litigation in deterring small numbers of file-sharers from participating in P2P networks.

Another category of responses (16.4%) emphasized the abuse of court resources resulting in the financial ruin of individuals caught up in the driftnet of lawsuits. Similarly, a large portion (44%) included those who decried the litigation as unjust while asserting that the whole episode had served to deepen the antagonism with the industry. As one 22-year-old student from the United States 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.

It appears that outrage functions as a resource in strengthening the file-sharing community. As one 22-year-old U.S. retail worker 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.

This last sentiment was more fully developed in a final category of responses, wherein 32.4% of respondents spoke of the greater levels of innovation stemming from recurring legal actions. Respondents mentioned better P2P applications, the adoption of new measures to maintain anonymity, and the increasing reliance on private tracker sites. For example, a 24-year-old student from Canada commented on the development of better P2P platforms in the wake of 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.

The increased reliance on private tracker sites was also cited by 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 resources, the cumulative effect of which may be a more decentralized and anonymous file-sharing community with emerging pockets of stronger social ties.

Conclusion

P2P file-sharers deserve a more nuanced treatment by academics. The term *piracy* tends to eclipse the structural dimensions of file-sharing, while the notion of *market imperfections* unduly privileges social relations premised on commodity exchange. Contemporary P2P systems are the product of technological developments reaching back to the arrival of the Internet some 40 years ago. Yet file-sharing is also grounded in a much older social tradition of commoning that stretches back centuries. The historical conflicts between commoning and commodification have always been about the relative independence of laborers from the wage relation and access to the surpluses of social production (Neeson, 1996). Contemporary conflicts over file-sharing likewise hinge on the relative autonomy of new forms of cooperative social arrangements. Many of the file-sharers in this survey believe P2P systems offer a means of exodus from the coercive relation to the content industries—not just for themselves, but for musicians as well. After all, with the advent of contemporary P2P systems, the consumption of music commodities is now a choice, rather than an imposition. Contrary to characterizations of their behavior as

antisocial, many of the individuals in this survey see file-sharing as a socially beneficial practice. Yet this study also raises the possibility that the various attempts to extinguish the commons may result in greater levels of antagonism, driving further P2P innovation and ultimately making the paradox of commoning more difficult for the content industries to resolve or assimilate. Future scholarship on the social practice of file-sharing must take account of these antagonisms in order to avoid normalizing existing legal and market systems. File-sharing is symbolic of a potential rupture in the social relations of capital. And no matter the eventual outcome of this crisis, file-sharers will have played a fundamental role in determining the trajectory of capitalist development in the sphere of information production and distribution.

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