# Culture and capital decoupled: Exploring the dynamics of peer-to-peer file sharing and copyright violation

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# Abstract

In this thesis the significance of casual copyright violation as enabled by the infrastructural fluidity of the internet is discussed (in particular, its most contemporary form, peer-to-peer file sharing). The aim of this discussion is to explore and promote a better understand of casual copyright violation, beyond the narrower conceptions challenged herein. The positions of progressive intellectual property advocates and of the intellectual property industry are presented, neither of whose analysis appears to rise above idealism or moralising. A triangulated research design was implemented, incorporating one-on-one qualitative interviews, a focus group and a survey of a student file-sharing population. While respondents were mostly able to contextualise and defend their actions, few had actively discussed or considered their file sharing. Consciousness of the implications of file sharing for university students is something that has sunk into the background of their everyday experience.

A dual-theory analytical framework is deployed in my analysis: firstly a version of rational choice theory is used to analyse peer-to-peer file sharing as a utility-maximising behaviour; and then the subject material is treated with Niklas Luhmann's social systems theory to highlight the macro forces at play in this setting. I conclude that peer-to-peer file sharing is less significant as an individual choice than it is as a structural feature of the digital age. With this in mind, the present struggle of the intellectual property industry against infringement in this time of unencumbered information flow is a struggle against contemporary infrastructural reality rather than against the countless individuals whose acts of copyright violation supposedly constitute some sort of challenge to the social order.

I conclude that peer-to-peer file sharing does not necessarily pose the challenge that representatives of the intellectual property industry argue it is. Further, if peer-to-peer file-sharing network distribution is an irrevocable development in modern system reality then those who conduct their business in digitisable goods, notably in cultural artefacts, must adapt rather than fight an inevitable tendency. Lastly, I briefly outline a few examples of emergent and yet unproven business models that seem capable of competing with peer-to-peer exchange, showing that there is a future for the production of cultural goods, despite modern communication infrastructure allowing people to bypass the market.

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# List of abbreviations

CCV – Casual Copyright Violation

DC – *DirectConnect*

DRM – Digital Rights Management

DVD – Digital Video Disc or Digital Versatile Disc

FTP – File Transfer Protocol

GB - Gigabyte

ICT – Information & Communication Technology

ICTS - Information and Communication Technology Services

IRC – Internet Relay Chat

IP – Internet Protocol

ISP – Internet Service Provider

KB - Kilobyte

MB – Megabyte

MPAA - Motion Picture Association of America

P2P – Peer to peer

RIAA - Recording Industry Association of America

TRIPS - Agreement on Trade-Related Aspects of Intellectual Property

UCT – University of Cape Town

VNS – Validity Network Schema

WTO – World Trade Organisation

# 1. Introduction

The great ease with which ordinary people are now able to use and redistribute digitisable goods is a diversely interpreted feature of the digital age. The infrastructure of the internet has emerged as a remarkably open and ill-defined space in terms of purpose and power, despite the significant role that capital has played in its development. The growing capacity of the internet as a communication system reached a point a decade ago where anyone who had access to a computer with an internet connection could make perfect, digital copies of cultural artefacts for redistribution. This development is the start of something profoundly new for economics and has highly significant implications for the order of society, most significantly for how we construct the notion of property. In what follows I outline the major arguments and challenges of contemporary *casual copyright violation* (CCV). Before these arguments can be understood in context, some essential background must be covered.

For the purpose of this thesis, CCV refers to the non-commercial reproduction[1], distribution and exchange of cultural goods and tools (software) which bear copyright restrictions. The term *cultural good* (or *cultural artefact* in more economically neutral terms) is a reference to the fixed state of human creativity and intellectual labour, including written language (books, academic articles), pictorial creations (fine art, computer-generated images) and audio-visual records (recorded music, film). All these cultural artefacts are formally treated as goods in capitalist society and their dissemination has been, until recently, relatively effectively governed and legally constrained through copyright law.

The principal form CCV takes, and which challenges the intellectual property industry[2], is that of peer-to-peer (P2P in colloquial abbreviation) file sharing. P2P file sharing is an ad hoc network system for exchanging and acquiring digital copies of data, often cultural artefacts and tools bearing copyrights (anything can be shared across P2P – not just things with copyright restrictions). CCV was, of course, practised prior to P2P file sharing through the use of analogue replication technologies such as photocopiers and video and audio cassette recorders, but such replication processes are laborious and produce copies of clearly diminished quality. The digital replication and distribution of cultural goods involves no degradation, is faster than real-time[3] and requires no medium-specific container. The requirement that a physical instance of an artefact was required to make a copy also limited the scope of pre-digital CCV. The emergence of P2P file sharing represents a turning point in CCV – the ease and exactness with which it can be done have made it prevalent to the point that it has provoked the debate and crisis I outline in what follows.

John Locke argued that it was the "natural law" of man's right to his body that engendered a similar right to the fruits of his labour (Davies 2002, p.2). Such logic, along with the argument that book-printing piracy would harm the trade of legitimate printers, who had direct agreements with authors, lead to the world's first copyright law, the Statute of Anne of 1709 in Britain. It was argued by the print industry of the time that harm to the business that directly remunerated authors for their labour was harmful to the future supply of

1 While commercial piracy is certainly related and somewhat relevant to this debate, I do not deal with it in full. This is primarily to keep the scope of this thesis defined.

2 I use the term *intellectual property industry* to describe an industry that derives a significant portion of its income from licensing and protecting copyright.

3 When using analogue technology to copy something, for example make a tape copy of a vinyl record, it is necessary for the record to play for the whole length of the record for it to be captured onto the tape. It happens in *real time* as opposed to the digital realm of copying where a copy can be made faster than real time where a computer simply recreates the bits and bytes of a file in a fraction of the time.

available books for publishing. It was also argued that by granting a limited monopoly over reproduction of creative work (cultural artefacts) to authors, scientific progressive as well as further creativity in the arts would be best encouraged (Davies 2002). Further, if the written word was ever to be widely read at all, printing was a prerequisite until relatively recently.

Since the inception of copyright as a limited monopoly (the original term of the Statute of Anne being 14 years with a possible further 14 year extension), it has expanded greatly, applying to types of pre-print press cultural artefacts as well as those that have followed (music recordings, photographs, films, etc). Similarly, its period was extended in the United States, after the passing of the Sonny Bono Copyright Term Extension Act of 1998, to the current period of the life of the author plus 70 years (Vaidhyanathan 2001). This most recent term extension was widely identified as a power play by intellectual property industry players like Disney, who managed to block the passage of Mickey Mouse into the public domain through the act (Lessig 2004; B. Lunceford & S. Lunceford 2008). While copyright law exists in different strengths and power to be enforced it in different parts of the world, the US intellectual property industry has established a high standard. Efforts to standardise copyright have been made, through World Trade Organisation (WTO) agreements, such as the Agreement on Trade-Related Aspects of Intellectual Property (TRIPS), which entrenched a minimum standard of copyright law enforcement amongst WTO members (Elias & Stim 2004). Agreements like TRIPS are part of measures that reveal the new interests of post-industrial societies.

Manuel Castells highlights the struggling manufacturing industry in the West during the 1970s as one of the causes of Western economy shifting its focus from material to informational production (Stalder 2006). Where the industrial era's politics reflected a subtext of labour struggles with capital, according to Castells, the information age is defined by conflicts over access to information and knowledge. The pervasiveness of the products of the American cultural industry has been well documented, from early Hollywood and jazz to contemporary popular music and consumer electronics. While cultural dispersion is not a passive process (Marling 2006), the key ingredient in the profitable dissemination of ideas and culture has historically been intellectual property rights, which include brand trademarks and technology patents as well as copyrights.

Despite the power the intellectual property industry has to protect its interests legislatively, its rhetorical power in society has not been as strong. Nevertheless, it stands behind the status quo of law and order, pushing the first of the two significant arguments I examine that relate to CCV: that CCV is the worrisomely common, criminal action of short-sighted, morally flexible petty thieves.

The second argument I look at is that CCV is a symbolic act representative of the new powers of agents in their roles as citizens, creators and consumers in democratic society. In this second conception, the heightened democratic level of access to information that digital redistribution allows is a necessary good for the functioning of democratic political institutions. This agency is argued to lead to the greatest level of innovation and advancement in creative exploits - the very societal virtues copyright law is intended to encourage (Lessig 2004). There are a few variants of these two arguments but for simplicity's sake I will group them and refer to them as (i) the normative copyright position and (ii) the progressive copyright position.

## 1.1 The normative copyright position

The normative position is exemplified by a public awareness campaign video produced by the Motion Picture Association of America (MPAA) in 2004 which had the following message:

"YOU WOULDN'T STEAL A CAR
YOU WOULDN'T STEAL A HANDBAG
YOU WOULDN'T STEAL A TELEVISION
YOU WOULDN'T STEAL A DVD
DOWNLOADING PIRATED FILMS IS STEALING
STEALING IS AGAINST THE LAW" (Loughlan 2008, p.401).

This video was appended to the beginning of the opening credit sequence of commercially available DVDs containing TV series and movies and is impossible to skip. One may deduce that the hopes of the MPAA were that this message would help keep legitimate purchasers of their products from breaking their copyrights in the future and that when the DVDs were copied, the message would possibly persuade others who already had purchased unauthorised copies of material owned by MPAA members to reconsider their behaviour.

The preoccupation of the MPAA and its sibling lobbying organisation for the music recording industry, the Recording Industry Association of America (RIAA), is the representation of their corporate constituency in the realm of politics, law and rhetoric in the public sphere. The "you wouldn't steal a car" video is an example of how copyright protection agencies (most notably for the entertainment industry in which the motion picture and recording industry are the dominant players) deploy rhetoric when dealing with copyright infringement. The message is simple: an uncomplicated statement depicting the acquisition of unauthorised copies of movies as illegal while also being suggestive of social deviance and criminality. The label, *pirate* is persistent in this type of rhetoric as well.

Patricia Loughlan's argument is that the rhetoric of "you wouldn't steal a car" is "an inaccurate and manipulative distortion of legal and moral reality" (2008, p.402). She cites legal precedence and definition pertaining to the logical distinction between the deprivation of physical property (theft) and the unauthorised use of intellectual property (copyright infringement) as well as questioning whether unauthorised replication as theft is reflected in social reality at all. It is, of course, implicit that where property is copied (or pirated) no one, including the owner, is deprived of the use of that property. Loughlan correctly asserts that copyright infringement being called theft is a misrepresentation of the letter of the law. Rather, copyright violation is the disregard of the exclusive rights of copyright owners to recreate their work for profit (Elias & Stim 2004). This is reflected as a charge of denied, *rightful* earnings in legal proceedings against plaintiffs.

While copyright infringement may not be theft legally, this does not preclude there being some sort of social truth or resonance in the rhetoric of the MPAA, which is a normative appeal for people to act against socially deviant behaviour (Loughlan 2008). Conversely, CCV is very prevalent, even more so during the digital age. It is unlikely that people would act routinely and on a large scale, outside their framework of morally acceptable behaviour - thus they probably do not consider their behaviour unacceptable. At most, copyright violation probably registers as some minor ethical misdemeanour, if anything. Norms form part of the subjective collective reality of actors and their prevalence can be empirically confirmed but it is doubtful that norms that constrain the use of intellectual property will be found in actors with the possible exception of those who directly derive income through copyrights.

The rhetorical weakness and the lack of social resonance of the normative copyright position seem evident (I will exemplify this in my literature review). Despite the weakness of their rhetorical position, the lobbying bodies of the intellectual property industry, most notably the RIAA, continue to conduct a legal crusade

against direct and vicarious copyright violation in North America. Sociologically, discussing copyright violation in terms of morality seems to have little explanatory power and this is principally why I argue that useful and full understanding of this behaviour needs to look beyond morals and value judgments.

The legal restrictions against copyright violation can be shown to be similarly weak along with the rhetorical as, for law to be functional and enforceable, it must "constitute conduct norms[4] in a society" (Heidensohn 1989, p.4). Laws that are at odds with common practice enabled by conduct norms are a tremendous expense and a continual source of offence for a legal system that is sensitive to them. Considering the prevalence of CCV[5], the consequence of copyright law will likely be deligitimisation of law generally, as has typically occurred with laws at odds with common conduct. America's prohibition laws of the 1920s stand as an excellent example of the law being at odds with the conduct norms of a society. Similarly, the introduction of laws in India to combat the social stratification of the caste system has certainly not been a wholly effective means of altering ingrained social practice.

## 1.2 The progressive copyright position

The progressive copyright position looks beyond morals and judgments. It is associated with the Open Source Software Movement[6] (FLOSS) (Liang 2004) and the Creative Commons movement[7] (Liebowitz 2006), often exemplified in the work of authors like Lawrence Lessig, who argues that a free, unencumbered internet as a vehicle for the free exchange of information is a boon to democracy and creativity, contributing to the best possible society (Lessig 2004). Authors like Lessig are not necessarily opposed to any form of rights or control over creative work, they simply feel copyright law has gone too far. However, their alternative (Creative Commons licensing – referred to as CC licensing henceforth) does not constitute a direct challenge to copyright law in the same way the CCV does. Briefly, CC licensing is a flexible approach allowing the creative rights holder to reserve certain rights and disallow others. Open-source software typically allows for later modification and free sharing but prohibits the sale of the software. Another common CC license provision is that creative work can be free to use as long as users do not derive profit from that use. Flexible licensing is argued to facilitate freedom of information and access to tools and cultural artefacts that will spur on further creativity in a way that a system based purely on restriction cannot. Whether this is true or not is a matter for experimentation and the passage of time.

As a progressive copyright advocate, Lessig (2004) identifies a reflection of the free, highly democratic and creative society he anticipates in the agency expressed by so-called *pirates* who freely consume and redistribute



4 With this assertion I anticipate the objection that the law cannot tolerate all behaviour simply because it is informed by a common norm; all sorts of bigotry and social cruelty are informed by normative impulses. To this I suggest that the distinction between the protection of social and the protection of economic liberties might form the basis of a distinction between normative behaviour that should or can be discriminated against and norms that should form a basis for rules. The line one draws between laws that root themselves in norms and those that cut against them might be arbitrary in some sense but what is true is that an efficient legal system that is a reasonable expense for a society is one that is mostly aligned with conduct norms. This debate is, however, beyond the scope of this thesis.

5 Accurate statistics on the prevalence of P2P file sharing are not readily available. I illustrate the difficulties of measuring P2P file sharing below.

6 "Open source" is an approach to licensing software that gives others the right to freely use, distribute and alter software (Stallman 1999, p.56). This is done through alternative licensing called GNU Public Licensing to keep software patent free.

7 Creative Commons is a flexible, multi-tiered alternative to copyright law where licensors choose the rights they wish to maintain and stipulate what can be done freely with their work. Creative Commons licensing is a move towards Lawrence Lessig's conception of free culture (Lessig 2004, p.xiv). For more information see http://creativecommons.org/

cultural artefacts. In so doing, social values and attitudes about the future are attributed to this group of people that are not necessarily a reflection of the reasons or motivations at play in their consumption patterns. In fact, much like the normative copyright position, progressive copyright advocacy is founded in idealism, which is frequently the source of statements about how things *should* be rather than how they *are* or *can* be.

## 1.3 Idealism

In the case of the progressive copyright position, unencumbered distribution of information (including cultural artefacts) is good because it makes society more democratic and increases the number and, hopefully, the quality of creative works in circulation. Democracy and its value are political ideals and consequently democracy is not necessarily a description of *how things are*. If democracy were a naturally occurring state it would not need to be theorised or painstakingly implemented as a political system.

Similarly, in the case of the normative copyright position, rights are highly notional ideals. Notions of rights have moved from philosophy into the popular consciousness, significantly through various social movements of the 20th century. Pragmatically speaking, though, one only has the rights one can be guaranteed by some larger force or power, typically the state. The ideals behind copyrights are fraught with the exact same problems that any assertion of rights has and, in the case of copyright, what good are rights when the ability to enforce them is limited in a critical way?

The fact that the two most prominent arguments relating to an illegal, allegedly problematic and common behaviour, are so heavily steeped in idealism does little to help us reach a clear and practical understanding of the behaviour in question.

## 1.4 The problem

CCV has many ramifications on both the micro and macro levels. If the intellectual property industry is right about CCV and commercial piracy[8] doing serious damage to its business and, consequently, the quantity and quality of creative work in the future, then CCV might be something that warrants serious effort at mitigation. However, I don't believe that CCV is the problem the intellectual property industry argues it is or that the future of the business of disseminating creative work and the process of authoring creative work are necessarily mutually dependent[9].

The intellectual property industry claims tremendous harm results from CCV; for example one estimate of the negative impact for the US entertainment industry is that "71 060 jobs and $2.7 billion in earnings" are lost by the industry in the US every year (Siwek in Butler 2007). However, it is not even clear that CCV necessarily has an uncomplicatedly negative impact, despite the grave claims of the representatives of the intellectual property industry. Several authors (Gu & Mahajan 2005; Oberholzer-Gee & Strumpf 2005), for example, cite the presence of a sampling effect that CCV is argued to create. In the same way that radio listenership is seen to promote record sales, the casual dispersion of cultural artefacts through social networks raises the awareness of the artefacts in question, arguably boosting the sale of these artefacts in the formal market (Liebowitz 2006). Of course, there is also reasonable doubt about how many people, after receiving

8 I do not deal in full with issues of commercial piracy in this study, primarily out of concern for conciseness.

9 The internet is a powerful, low-cost distribution system and physical container media (e.g. burnable CDs, flash drives, etc) are increasingly inexpensive. Mass manufacture of legally authorised copies of cultural goods is hardly an essential service in society today. Perhaps the problem is how creators will adjust their business model to a setting of free distribution.

or experiencing a cultural artefact for free, would then go and buy the material article.

Oberholzer-Gee and Strumpf (2005) conducted a detailed empirical study of the impact of file sharing on record sales which showed statistically insignificant effects. They posit an alternative thesis: poor early-2000 macro-economic conditions in the US translated into less expendable income and the growth of the cellular phone and home video game market also diverting spending. Both factors have influenced the sale of cultural artefacts. Conversely, Liebowitz's empirical study, which matched declining sales reported by the RIAA across the same period with the growth of file sharing, concluded that "file sharing has brought significant harm to the recording industry" (Liebowitz 2006, p.24). It is not strictly important for my study to be able to show whether such harm is significant. What is important is that the intellectual property industry behaves in the way it does, attempting to police P2P file sharing and so creating a tension with its consumers.

The argument presented by the intellectual property industry about the threat CCV poses to its business appears to be partly informed by the idea that what the industry identifies as a lost sale can be converted into a sale (Gu & Mahajan 2005). This is faulty logic because it assumes that when CCV occurs, the actors in question firstly have the money to buy the goods in question and, secondly, that they would necessarily buy them at market price if they were unable to find a free copy. Gu and Mahajan (2005) argue that the decision whether to engage in CCV is governed by marginal utility. They give the example of the cost of a copy of Microsoft's Windows XP computer operating system, which was $269 in the US in 2005 - a relatively affordable price for the majority of middle-class Americans. However, this price is a small fortune for the average person in a developing country like India or South Africa. The price of such a product makes the majority of Indian Windows XP users pirates by default (India has one of the world's highest software piracy rates). They are essentially priced out of the legitimate market - being legitimate Microsoft customers is often not even an option.

## 1.5 Fighting change

As with many significant technological shifts, the internet and the freedom of information it affords appear inevitably to entail a fundamental paradigm shift, one we cannot step back from. In Anthony Giddens's observation, "the juggernaut of modernity" (1990, p.249) brings unanticipated consequences that must be adapted to. In Castells's terms, the intellectual property industry is trying to resist the accelerating pace and heightened competition and demand for innovation of the network society (Stalder 2006). In the case that the intellectual property industry is wrong about the threat to its business from CCV, its defensive measures become more problematic.

Whatever the case, the intellectual property industry expends tremendous effort and expense attempting to combat CCV. Its attempts at enforcing its rights take the form of encryption and surveillance (David 2010). However, the vast network of nodes that make up the internet is a system that is optimised for the free flow of information. Politically and technically, it is difficult to constrain the flow of data across the internet. The first line of defence is Digital Rights Management (DRM), often entailing encryption. DRM takes many forms: software on CDs and DVDs that attempts to obstruct attempts at replication; serial numbers as a prerequisite for software installation; self-destruct protection measures in digital files; and complex watermarking systems to aid in later detection through surveillance. The trouble with attempts at DRM

implementations is that they are all hacked and cracked[10] eventually and these products find their way onto P2P networks in an unhampered form.

While DRM is something faced by anyone in the world attempting to use contemporary cultural artefacts, surveillance is a phenomenon that currently affects residents of First World countries, primarily the US. Under the auspices of the RIAA, a legal crusade started just after the beginning of the new millennium against any American who has violated music copyright. However, about 60 million Americans have used file-sharing services, a number that is greater than some years of voter turnout in the US (Liptak 2003). Obviously such an approach to copyright infringement does not serve as a sufficient deterrent.

Through online surveillance techniques, internet data is scanned for the intellectual property of RIAA members and traced to internet protocol (IP) addresses. The personal details of account holders are subpoenaed from internet service providers (ISPs), allowing the RIAA to threaten offenders with legal action while also providing the option to settle out of court. With significant court penalties of "$750 to $150 000 per infringement" (Liptak 2003), the consequences of being singled out are significant although the chances are still small. There is evidence that the intimidation effects of the lawsuits in the US might have had some overall affect on the number of CCV offenders active over the internet for a few years in the US (Liebowitz 2006) but the digital divide is shrinking and with increasing numbers of internet users worldwide, the number of people engaging in online CCV activity increases as well. Many file sharers will also pursue more covert means of P2P sharing rather than abandon the practice.

DRM, and surveillance followed by litigation is a limited strategy that cannot constrain the behaviour of the world's internet user population, let alone that of the US. Outside the incredibly costly and unlikely prospect of some sort of global internet monitoring system not yet implemented, it seems surveillance will continue to have a limited effect because, even if a list of all CCV perpetrators existed, judicial systems do not have the capacity to combat anything as common as CCV. If anything, the measures taken by the intellectual property industry to protect its property have been a stimulus innovation in P2P technology.

## 1.6 A brief history of P2P file sharing

I have already suggested that the internet is a system that is optimised for the free flow of information. With that in mind, it makes the efforts of Sean Fanning, the creator of Napster, the world's first popular P2P file-sharing program, seem less remarkable as a marker of individual creativity and ingenuity and more an inevitable development in the natural tendency of the internet as a system. File sharing had been occurring through the internet prior to Napster but it was comparatively laborious, involving trawling news groups, bulletin boards and the internet in general to find the addresses of file transfer protocol (FTP) sites which might or might not contain the files you were looking for (Wang 2004). Fanning was such a file sharer. With a cache of MP3 music files on his computer, he started to wonder if he could write a program that would allow him to easily connect to other internet users and reciprocally share the files he had collected. Napster

10 Computer hackers have a wide degree of activity attributed to them. In relation to software, many hackers produce cracks which are fixes and work-around procedures that allow users to bypass built-in anti-piracy measures in software. These cracks are often distributed through P2P networks.

While anti-piracy measures are implemented to combat the replication, or "ripping", of music CDs or DVDs containing video entertainment, in some countries the law allows users to bypass this protection under the auspices of the legal principle of fair use which allows copying for backup purposes. Of course, the measures that facilitate the fair use of legitimately purchased goods can just as easily aid the illegal reproduction of the same goods.

was the product of this desire, presumably a common one, given the incredible popularity of Napster during its short life - 80 million users are estimated at its peak popularity during its life of less than two years (Ryan 2002). The program functioned through a central server system which indexed all the shared material offered up by participants, compiling search results for users and finally directly connecting users for file transfer. Although no copyright infringing files were ever directly hosted on Napster servers, "contributory and vicarious liability" would finally be the legal ruling that put an end to Napster as a file-sharing service (Ryan 2002, p.504).

The fate of Napster spurred on the development of the next generation of file-sharing systems because by the time Napster's servers were shut down, many millions of people all over the world had learned they could use the internet to acquire cultural artefacts conveniently, quickly and freely. The legal setting of post-Napster P2P file sharing brought about network architecture that didn't require a central server (Wang 2004), exposing companies developing P2P programs to less liability for what users did and giving users more privacy. The second generation of P2P programs faced its own challenge in which a popular P2P program, Grokster, lost a case against Metro-Goldwyn-Mayer Studios (Boliek 2005), a film production company, when it failed to prove that Grokster had substantial non-infringing utility, as Sony had successfully done in 1984 in its defence of its Betamax video tape technology (E. Lee 2005). While legal precedents may have been established against a creator of a sharing network who does not directly host copyrighted material, there are numerous platforms on the internet doing the same thing, each with millions of users.

## 1.7 Unbeatable

When Grokster was shut down, nothing significant happened because when a file-sharing network is shut down, it's like striking a seed pod - users simply disperse across a growing number of smaller networks. Even though Grokster was shut down legally, it is possible that a network without a central server can physically live on beyond the company that made it because it is the number of frequent users that make a network stable. There are also sharing programs that exist outside the market entirely, built only to facilitate sharing, and consequently there is no legally liable entity, like a company or corporation, for the legal system to attack and shut down.

The more reactive the legal system becomes, the more P2P networks have taken on increasingly covert forms. For example, the very approaches used to obstruct those trying to replicate goods can be used to hide them; an open-source P2P program called Mute encrypts data sent between different instances of itself, making it very hard to track (Becker & Clement 2006). A consequence of encryption and channelling P2P data through non-standard ports[11] has been that P2P traffic is increasingly hard to identify, making counting as well as tracking how much P2P activity occurs difficult (Karagiannis et al. 2003). Although their data is dated, Karagiannis et al. estimated in 2003 that a fifth of all internet traffic was P2P traffic. In congruence with this suggestion, Lunceford and Lunceford (2008) estimate more recently that as much as 80% of traffic used by end users is P2P traffic[12].

11 Ports are computer channels arbitrarily assigned to certain types of data moving across the internet. For example web browsers are typically assigned to port 80. Any type of data could potentially travel through any port and the purpose of creating channels is so that some data can be prioritised over others (typically email and web browsing data).

12 While the article by Lunceford and Lunceford is not clear on how this was measured or how accurate the measurement is, even if there is a significant margin of error, the point is still well made. This is also not a direct indication of the number of people using P2P networks; a moderate number of frequent downloaders could easily consume large amounts of bandwidth through downloading. Conventional "surfing" of the internet consumes comparatively very little data.

Recently, what was the world's most popular bit torrent[13] tracker website, The Pirate Bay (thepiratebay.org) was the subject of a fairly high-profile court case in which the long arm of the MPAA reached into Sweden, the home of The Pirate Bay, and won a court ruling that ordered The Pirate Bay's hosting ISP to take the site down. Prior to the case The Pirate Bay's servers had been seized by Swedish authorities. Within hours of the site being taken down it was up and running again (with a new host in another country) while its founders distanced themselves legally from the site (Graham 2009). At the time of writing this thesis The Pirate Bay website remains online.

What this illustrates is that even when the centre of a network is targeted legally and supposedly defeated, there can still be life for that network, despite the power of bodies like the MPAA. And despite the legal vulnerability of bit torrent tracker sites, users, due to the nature of the bit torrent system, only transmit bits and pieces of files that are assembled by torrent client software, making it very difficult legally to assert that person X transmitted copyrighted file/s to person Y on any given date (David 2010).

The purpose of this brief history is to add weight and support to the argument that *file sharing is a largely irrevocable development that must be adapted to*. The only effective way to stop online file sharing would be to shut down the internet and, even then, CCV would continue (on a much smaller scale) as it had before the internet existed. It is hypothetically possible that some sort of global internet governance system could be implemented, mirroring government intervention in Chinese internet use. However, such a system would be inhibitively costly and labour intensive[14] and it would assume that society would grant the intellectual property industry the power to intrude on its privacy in such a manner. The intellectual property industry is fighting against the reality of the internet and the free flow of information it makes possible. This is understandable in certain respects because the intellectual property industry is an industry which has grown powerful and wealthy from a business model that has had fairly stable growth until recently.

## 1.8 The new economics of cultural production

The economic significance of any good that can be digitised has fundamentally changed and this is something the intellectual property industry has not come to terms with. The final market value of a cultural artefact has always technically been flexible. There is the initial cost of developing, manufacturing, transporting, marketing and retailing the artefact. In terms of mass marketing of cultural artefacts, industries need to decide at what point expenses will be recouped (e.g. at 10 000 sales) after which production mostly equals profit. It is also variable in the case of cultural artefacts because they only have a market value when they also have a subjective value – the price on the sticker is only realised when the customer wants the item enough to pay for it. (This is why unsuccessful books or music albums appear on sale in obscure "overrun" shops for a small fraction of the conventional retail price).

13 Bit torrent is another protocol used for file sharing and content distribution, originally created in 2002 by Brian Cohen (Rimmer 2007). Torrents are files that act as beacons which track other active instances of the same torrent. Torrent clients (software that manages torrents) will both send and receive pieces of incomplete and complete downloads to and from multiple users of the same torrent, achieving a more efficient and reciprocal sharing environment. The downside to the bit torrent system, from a file sharer's perspective, is that it is partly centralised as torrents are, for lack of a better system, centrally stored by torrent tracker websites such as The Pirate Bay.

14 Barring further changes in the laws pertaining to the prosecution of copyright infringement in Western countries, copyright violation is necessarily dealt with a on a case-by-case basis. Digital copyright infringement detection is not yet a process that can be accurately automated and any attempt at expediting the legal process would certainly come under criticism as an attempt to narrow the political rights of individuals in favour of corporate well-being.

Most of these operational costs can be minimised or eliminated in the digital realm. Castells remarks on how the increased efficiency and innovation of informational society allows greater productivity though modern technology (Stalder 2006) by means of which initial productions costs tend to decrease. Manufacturing and transport become obsolete. Retailing becomes a nominal expense as an online presence is an almost negligible expense. Marketing of digital products can be just as expensive as for conventional goods when pursued through traditional channels of communication but online marketing has proven to be effective and considerably cheaper too. Of course, the intellectual property industry is taking advantage of these features of contemporary economics but it is still a producer of physical artefacts, which bear historical costs. It has nevertheless kept the end costs of its digital products relatively high[15], perhaps out of fear of being seen to have conceded to the flexible nature of the market value of its products. This flexibility is potentially an advantage that can be exploited.

It was easier in the past for the intellectual property industry to maintain an engineered scarcity of cultural goods as a resource. In the digital age, we have entered a period of "post-scarcity" (David 2010, p.3), which means the value of a cultural artefact is decoupled from the number of material instances of it that exist. This means that the dynamic of supply and demand no longer operates as it historically has in determining the value of a good. Of course, if supply and demand were skewed even in the digital realm they may have relative effects on value, but the cost of meeting demand still tends towards zero.

Another feature of the economics of cultural commodities that has been amplified in the digital age is non-excludability (Boyle 2008) - the quality of products that make them likely to be used by more people than just the original buyer. Before file sharing, the number of people you could share a cultural artefact with was limited to those in direct contact with you. Stan Liebowitz also points out that downloading a copy of a cultural artefact might serve as a substitute for a purchase that might have otherwise been made, hence the "substitution effect" (2005, p.442). Non-excludability has been a persistent feature of books, newspapers and especially music. In the case of print publications as well other media, access has been deemed important enough that in Western society we provide free access in the form of public libraries. Also, as long as viewers are watching unedited live broadcast TV (without adverts edited out, as they are in what is circulated on P2P networks), it is good for the producers[16].

The effort that consumers of cultural artefacts expend to maximise their potential cultural consumption is a tribute to the importance of contemporary culture to society, despite the implications for the market value of these artefacts. If anything, this desire, coupled with the simplicity and ease of distribution in the digital age, is arguably economic potential unrealised. The intellectual property industry persists in fighting to hold



15 The music business has moved into the online realm. The world's most successful online music store, Apple's iTunes, sells individual songs for 69c to $1.29 which is still $6.90 - $12.90 for album (assuming an album contains 10 songs) - not very far from retail prices for the physical artefact. Relatively high prices like this are also revealing, keeping in mind that Apple is now famous for selling portable music listening devices that can hold as many as 40 000 songs which, at cheapest from iTunes, would cost $27 600 to fill. It's not likely that that many iTunes customers spend this amount of money, prompting the question, *why is the high capacity features of iPods such an attractive market feature*? (information from http://www.apple.com/itunes/ on 22/07/2010).

16 In a lecture at the Australian Film Television and Radio School in 2005 entitled, "Piracy is Good?" by futurist and author Mark Pesce, a compelling argument is made for how free distribution of TV programmes outside release schedules can be good for the television industry. Pesce also illustrates the possibility that TV production may have a viable economic future beyond the TV network business model. See the lecture at: http://video.google.com/videoplay?docid=-1720068211869162779

on to the business model that gave it life and power, even though it is becoming untenable. Part and parcel of the aggression towards and criminalisation of a huge portion of cultural consumers (customers), is that it is an approach rooted in a fundamental (and possibly wilful) mischaracterisation of social actors and the broader systemic forces at play.

In the literature review that follows I look past idealism, past crude notions of criminality and deviance, for a more useful understanding of the social and systemic forces surrounding CCV. Following that, the methodology chapter discusses my exploration of the theory through an empirical investigation using a research design that incorporates the product of one-on-one interviews, a focus group and a small survey of users of a university student P2P file-sharing network. My key findings are discussed and presented in chapter 4, "Analysis". Lastly, "Conclusions" (chapter 5) discusses the implications of my findings. An alternate thesis of the broader systemic significance of file sharing is also suggested. In the conclusion I offer some projections of the future of cultural production in the setting of the unrestrained digital redistribution that is the topic of this thesis.

# 2. Literature review

Much of the available literature on the topic of contemporary CCV unreflectively panders to the plight of the intellectual property industry, assessing the extent of *the problem*, while sometimes making suggestions on how its fight might be strengthened. This literature is typically very aware of the theoretical weakness of the intellectual property industry's position.

One such article reaches the primary conclusion that music listeners frequently become devoted to and enamoured of their favourite musicians and this devotion, or "idolisation" (Chiou et al. 2005, p.161) is a key factor in the decision people make in purchasing a CD as opposed to getting it for free. It is suggested that the emotion and loyalty fans feel can be played upon to fight piracy. Ironically, Chiou et al (2005) also identify that many fans find themselves compelled by the loyalty they feel to their favourite musicians to share their experience and passion, even if that is through making copies of the music they buy to freely distribute. The reason seems to be that despite the willingness of many people to spend money in acquiring cultural artefacts, we do not directly understand them as having a monetary value (after all, mass-produced cultural artefacts are mostly poor investments); it is rather that we place subjective experiential and social value on cultural artefacts. When that experience is subjectively significant, some will be willing to spend a great deal more than the market value.

## 2.1 Culture is sharing

Ian Condry, like many others, identifies a "culture of file sharing" (2004, p.344) which I have briefly characterised in my introduction. Condry suggests that music is part of a category of cultural artefacts that we are socially obligated to share. This makes a lot of sense, considering the potentially socially alienating experience of refusing to copy a CD for a friend out of restraint in relation to copyright law; *sorry, you can't have a copy because that would be breaking the law*. This would certainly be an unlikely thing to say but not because people are by default weak legal adherents. It is because consumption patterns are a significant part of identity formation in "millennial capitalism" (Miller, Camaroff & Camaroff in Condry 2004, p.353); the necessity to be able to express specific taste is very important socially in contemporary times[17]. Awareness of and literacy in current cultural trends is a key component of contemporary cultural capital.

Steven Hetcher similarly identifies file sharing as a "permissive social norm" (2004:10) while decrying the absence of a converse, restrictive norm. He, like many others, considers this *permissive social norm* to be newly emergent, a product of a brief history of being able to easily get products for free. Conversely, I argue that this type of analysis is too easily misled by the novelty and immaterial nature of P2P file sharing. It certainly is true that many millions of people across the world are now able to easily acquire free copies of the cultural artefacts that they desire without leaving their homes - that much is new. What is not new is the underlying dynamics that motivate this desire, something that has always been a part of society, before the commodification of culture.

"Culture is mediated and enacted through communication" (Castells 2010, p.357), through the vehicle of language, through our predilections as social beings, through the internet (which Castells is concerned with)

17 Having things in common and finding shared tastes have arguably always been important parts of social bonding but it is much harder to find something in common when tastes have become increasingly plural. Cultural industries have had to respond to a host of audiences to keep up. It is increasingly unlikely that appeals to any variety of universal value would be greatly successful in an increasingly decentralised, network society (Castells 2010).

and, most significantly for this study, through the creation and distribution of cultural artefacts. Popular literacy is arguably one of the most significant changes for a society. Popular literacy exposed people to life outside the village, bringing a world of entertainment and knowledge to the masses in a remarkably cheap and long-lasting form. The emerging literate persons seemed to have an inexplicable drive to read in a way that simply couldn't be explained by practical necessity (Laqueur 1976). Popular literacy brought about the common practice of book lending, which later became institutionalised. Key always to the experience of culture is sharing, whether in relation to localised dispersion oral folk culture or mass print culture. Sharing was embedded in music appreciation culture long before the technology that now so greatly enables that sharing existed (B. Lunceford & S. Lunceford 2008). This is a key distinction I wish to emphasise: the impulses that drive P2P participation are pre-existing impulses that, when coupled with the technical capacity of the internet, produce the phenomenon of P2P file-sharing networks.

It might be argued in response that sharing and acquiring cultural artefacts through P2P networks on the internet is unitised and impersonal, devoid of many qualitative features of face-to-face sharing. This can be true, in as much as it is possible to be private library borrowers or online or postal order book buyers who do not discuss or lend books they read. P2P sharing after all has roots in internet-based chat programs that predated it. For example, Internet Relay Chat (IRC), a very popular chat program protocol, also had a built-in file-transfer system (Wang 2004). IRC programs divide streams of communication by *rooms* or *channels* that users join and which are themed around topics of discussion, or alternatively a type of cultural artefact of interest. P2P programs have inherited the chat features of programs like IRC for users to communicate, stimulating the growth of a new variety of *virtual community*; "self-defined electronic network[s] of interactive communication organised around a shared interest or purpose" (Rheingold in Castells 2010, p.386), the purpose being file sharing. Virtual communities are primarily built on a great multiplicity of tenuous ties but participants also build up a smaller group of stronger ties, built on reciprocity and support (Castells 2010). In summary, online interaction, whatever its object, can be as rich a culturally interactive experience as face-to-face interaction. However, the social links generated are typically secondary and weaker in comparison to face-to-face relationships.

## 2.2 P2P economy

While much of our interaction with cultural artefacts is in the realm of subjective cultural experience, there are also objective patterns in our consumption and the dynamics of P2P networks. From an economic perspective, file-sharing network participants attempt to "maximize their consumer surplus" through their behaviour (Becker & Clement 2006, p.10). P2P network participation can be shown to be both an example of *self-interest* and *utility maximisation* in the classic rational choice theory sense (Allingham 2002); expense is minimised while consumption is maximised.

Becker and Clements also suggest P2P networks constitute "digital gift economies" (2006, p.10). A contributing factor to the differing rules of exchange is the lack of conventional supply and demand[18] constraints. In the place of money, reciprocity is the currency of P2P file sharing. Contradictorily, many P2P networks are mostly populated by *free riders*, users who *leech* content while providing nothing for

18 Supply and demand do affect P2P networks but not in the way they conventionally influence a market; low or insufficient supply means fewer sources and in turn poorer download speeds and possible unavailability (and greater cost in time). Lower supply is typically accompanied with higher expectation of reciprocity by the individual. High demand will directly create supply (as opposed to stimulating it).

others to download (Ranganathan et al. 2003). The contradiction is evocative of the classic problem of the Prisoner's Dilemma[19], where cooperation leads to the best results for all and non-cooperation leads to comparatively diminished utility. If it is rational to pursue one's interests without consideration for those of others, then free riders are perfectly rational but if all P2P participants behaved like them, P2P sharing would be a zero-sum game. However, unlike the Prisoner's Dilemma, where full cooperation has markedly better consequences for all concerned, P2P networks can survive with a sufficient variety of files to sustain the network, despite free rider rates of around 70% and around 50% of file requests being fielded by the cooperation and provision of 1% of the participants, as in the case of the once popular but now defunct P2P program, Kazaa (Ranganathan et al. 2003). The truth is that relatively low levels of cooperation in a P2P economy can ensure the base of files that keep the network going, at a moderate higher utility cost to the contributors.

Despite this apparent contradiction, Becker and Clements (2006) have an answer and it has to do with the life cycle of a network. Depending on where a given P2P network is in its life cycle, there are different courses of action that are rational. In the start-up phase a P2P network need a lot of support - if it doesn't manage to build up a sufficient base of available sharing material through reciprocity, the network will become unviable and participants will lose interest before it is a stable network. Once stable, it makes much less of a difference whether users contribute or leech, evidenced in the apparent low level of reciprocity in the Kazaa network. Finally, at the point that a network is nearing the end of its life span[20], it becomes rational for everyone to leech as much as possible because there is no future for the network at that point.

The last consideration that explains the rationale of the divergent behaviour of leeches and reciprocators is their level of personal investment in a given network. As discussed in my introduction, P2P networks often constitute virtual communities and P2P networks are often formed around interest in a particular category of cultural artefact. P2P participants who become part of the community aspect of P2P networks become invested in their primary network rather than P2P sharing in general, thus they start to take on greater personal responsibility for the future viability of the network. In contrast, leeches are not necessarily just casual users; they simply have not invested strongly in any specific network, but rather in the overall practice of acquiring cultural goods for free off the internet[21]. With these guidelines, one can start to understand the divergent rationales in P2P participation.



## 2.3 Rational action

Since rational choice theory is often considered a flawed conception of action in sociology, some qualification is in order. Firstly, I do not propose reduction of all action to crude utility maximisation. Even if one doubts

19 The Prisoner's Dilemma is a hypothetical mathematical model from game theory devised by Albert Tucker to illustrating the economic concept of *Nash equilibrium* (Hargreaves-Heap & Varoufakis 2004). There are variants of the Prisoner's Dilemma but it goes something like this: two people are imprisoned and held separately, suspected of committing a crime. There is no real evidence so their captors propose the following: confess and if your partner confesses as well, both of you will serve 3 years; if you deny the charge and your partner does likewise you both go free. However, if you deny and your partner confesses, he or she is rewarded with freedom while you serve 5 years (the reverse applies for the partner). The irony of the Prisoner's Dilemma is that even though cooperation has the best results, with knowledge of the other actor's available choices the logical decision is confession serving 3 years with the off chance of the partner's denial. P2P networks can be analysed as a Multi-Person Prisoner's Dilemma but contradictorily, minimal cooperation is sufficient for optimal P2P network function (as illustrated above).

20 Possible reasons are numerous: legal challenges against its creators, user migration to newly emergent networks, etc.

21 Users like this will no doubt download material from multiple sources, abandoning them and moving on as they become legally threatened or incapable of providing the files they desire.

rational choice's usefulness as a universal tool for deciphering action, one must at least concede that utility maximisation is indeed an impulse of human beings (along with a number of other drives). The utilisation of rationality I propose is not as a directive or an assumption about the nature of human action but rather as an interpretative tool. With the aim of pursuing a less extreme account of rationality, I intend to look at action as boundedly rational. Bounded rationality is a softened account[22] of rationality, a contrast to accounts which may assume actors as having access to all relevant information, allowing them to maximise utility in an objective manner without constraints (Gigerenzer & Selten 2001). Bounded rationality takes into account the subjective position of actors, entailing their economic, sociological and psychological limitations (Moessigner 2000).

Considering rationality in practice rather than theory necessitates recognising that we are often poor judges of probability and risk and that as actors we will often fail to objectively maximise utility. There is frequently an absence of active decision-making in that we do not consider all of our actions in detail prior to taking action, particularly routine action. Rationalisation primarily comes into play when actors feel the need to retrospectively justify their behaviour and we are reflexively able to recount a deliberative process that probably didn't happen in full (Allingham 2002). Such routine actions, although not directly based on preceding utility calculation are mostly rooted in personally generated or learnt rules of thumb for *means-end appropriateness* (Moessigner 2000). Finally, it is typically only when we are faced with decisions that are not routine and that have some significant consequence at stake that we strive for rationality most strongly (Wagner 2001). In what follows I will take these principles as a guide for considering the rationality of CCV.

## 2.4 P2P file sharing as a decision

In using a limited account of rational choice theory as a guide for looking at P2P file sharing I propose a model of preferences and constraints that appears a lot like the Parsonian revision of the utilitarian model for action. Parsons adds "conditions of action ... beyond the control of the actor" and the regulatory function of norms and values into the utilitarian equation of *means/ends leading to preference satisfaction* model (Joas & Knöbl 2009, p.38). Many of the factors that come into play in the decision of whether to buy cultural artefacts or acquire them through P2P networks come out of the discourse around file sharing.

As already discussed, the infrastructure of the internet has effectively eliminated most physical constraints in accessing cultural artefacts. Most significantly, no capital is required[23], neither is travel to a point of sale. What remains is the desire for cultural artefacts mediated by constraints and regulated by norms and values – in this case positive sharing norms which encourage P2P sharing.

In terms of constraints, the primary factor, given P2P file sharing as a norm, is the risk of legal prosecution (Phau et al. 2010). This risk, however, is limited, especially given the limited power of a legal system to deal with any prevalent violation. In a country like South Africa, prosecution as a result of CCV is also largely unheard of. As long as copyright violation is non-commercial, the risk and scope of any legal ramification is greatly reduced.

22 Bounded rationality may be conceived as a retreat position for the rational choice theorist to rescue the theory by describing behaviour that is apparently irrational as examples of deficient or failed attempts at being rational. For those who argue against rational choice theory this may represent an untenable amendment to an already flawed theory. What I wish to take from bounded rationality is the assumption that people attempt to behave rationally despite their limitations, even if their actions don't appear rational with hindsight.

23 No capital other than that which is required to gain access to the internet.

Most of the factors that come into the decision in question are enabling rather than constraining. The difficulty of ascertaining negative consequences of P2P network participation may be a factor (Chiou et al. 2005). I have already demonstrated how difficult harm is to demonstrate empirically in the case of the music industry. The imperceptibility of any negative consequences of file sharing is certainly an enabling factor.

Another influence on P2P participation decisions is a general rise in anti-corporate attitudes (Phau et al. 2010). The idea that wealth generation to the exclusion of all other concerns (especially concern for one's fellow human beings) is reprehensible has become part of the modern zeitgeist. Corporations are well aware of this and careful to manage their social presence through public relations but, for a number of reasons, the music industry appears to attract less sympathy, not least because of the lawsuits the RIAA pursues against its potential customers in the US. The history of record companies effectively cheating musicians out of royalties (B. Lunceford & S. Lunceford 2008) is also part of public knowledge, a fact that certainly does not contribute to any sympathy for record companies. Overall, those with a poor opinion of an industry which has historically manufactured a cultural product they consume are unlikely to feel sensitive to that industry's plight, especially when that industry is no longer a prerequisite for cultural consumption. Anti-corporate attitudes contribute to a sense of social justice being meted out to an unfair and selfish industry through P2P file sharing.

Part of the negative light in which the music industry (and other cultural product producers) is viewed relates to the popular perception that cultural artefacts are overpriced (Condry 2004). Price is of course a relative thing, as discussed above in terms of marginal utility. It would appear that this criticism is partly based on the large disparity between retail price and the cost of replication media, plus the knowledge that the scale of production the music industry operates at means actual reproduction cost are relatively low. While businesses do have operating costs, the profit margins on cultural artefacts certainly make some people more likely to find a cheaper or free source. Record companies are not blind to price sensitivity and have from 2000 onwards attempted more competitive pricing strategies (Liebowitz 2006) but record companies still have not yet found a successful way to compete with a free alternative.

While there are numerous subjective and situational rationales for P2P file sharing's acceptability, there are a few universal factors that may make people decide not to use P2P networks to acquire some things. One of the most significant is the quality of files available on P2P networks. Data compression has been a necessary step in making the internet a viable system generally, especially when bandwidth was more limited[24]. The now famous audio compression format MP3[25] facilitates a reduction in file size of audio files down "to 1/12 of their original file size without a noticeable loss of sound quality" (Ryan 2002, p.498), at least to untrained ears. Compression of video files and picture files has also been a general system practicality for both the internet and P2P networks generally. The impact of compression is most obvious in the quality of video files available on P2P networks and there is a growing disparity between this level of quality of video file and what is available on current commercial standards of video (Blu-Ray and HD-video). As I've already said, the capacity of the internet has grown in tremendous leaps and a consequence is that compression is less of an absolute necessity but what this does mean is for anyone concerned about audio fidelity and video quality, it can be difficult and time consuming to find files on P2P networks that meet their standards.

24 Consumption of bandwidth has grown with the capacity of the internet as a network, thus there will likely always be pressure on internet infrastructure. As a result, data compression will likely always be a necessary practicality.

25 An abbreviation for Motion Picture Experts Group, layer 3 or alternative MPEG-1, layer 3.

There are numerous common rationalisations for P2P network participation and I deal with these more expansively in my data analysis. This section presents the major factors present in the literature on file-sharing behaviour.

## 2.5 Networks as systems

While undertaking this research project I became increasingly struck with the question, *what if file sharing is not a choice?* I have already outlined that rational choices typically only occur outside routine behaviour and most often when stakes are high. P2P file sharing clearly becomes routine and although illegal, it is low-risk behaviour. The legal, moral and political arguments about the character of P2P file sharing reduce analysis of CCV to the level of the individual, whereas the key level of interaction appears to be at a broader structural level. Even though each file downloaded from a P2P network is conceivably an act of agency, together all these acts make up a structure (as with any structure), and in this case, a network.

The structural interplay relevant to my study is nicely illustrated by Lawrence Lessig. He presents a model with four relevant systems at play: the law, the market, architecture and norms (Lessig 2004). The law is a restraint on our behaviour in the form of rules which typically govern us through the threat of punishments like fines and imprisonment. The market governs our actions in relation to commodities through propositions; if you desire X, you must pay for X to satisfy the economy. Infrastructure is a description of the physical constraints and barriers we face in achieving what we desire. The formal prescription of this arrangement is that the economy dictates goods must be bought and the law enforces this rule. Infrastructure would entail the physical barriers to obtaining something including travel to a point of sale and navigating the payment procedure. Norms encourage or restrict behaviour despite the other systems.

The internet and various uses of it, including P2P file sharing, have radically changed infrastructure in this model, to the point that infrastructure can override both law and economy. Norms might restrict behaviour but as discussed already, norms relating to CCV are enabling rather than restricting. The economic exchange that has historically been a prerequisite to acquiring goods is now bypassed through infrastructure. The legal system typically protects the requirement of economic exchange but its configuration has been oriented towards physical violation. The law, as a system, has tried to adjust, updating itself with measures like the Digital Millennium Copyright Act of 1998 (DMCA) which in the US officially extended legal powers and obligations to challenge copyright violations in the digital realm (David 2010). As discussed above, laws that don't cohere with conduct norms are costly and seldom strongly enforceable. Considering the significance of cultural artefacts, socially and culturally, it is easy to see how P2P sharing would spread as widely as it has, despite being at odds with both law and economy.

Before pursuing a systemic analysis, I must consider the applicability of Castells's highly significant work on networks, informationalism and the internet (which seems a logical place to start). Castells provides an excellent detailed account of the emergence of technological systems influencing society and its culture. Very aptly he describes how people "adapted, not just adopted" (2010, p.393) new technology to their own purposes, of which P2P networks are a striking example. Castells also notes the increasing agency expressed by consumers of media and culture, even prior to the internet, which made TV audiences difficult to capture at a point. Media diversification has, according to Castells, weakened "the symbolic power of traditional [message] senders external to the system, transmitted through historically encoded social habits: religion, morality, authority, traditional values, political ideology" (2010, p.406). This is evidence of why these modes of communication appear ineffective in curtailing P2P file sharing. This active role in consumption

is highlighted by another distinction Castells draws between two types of multi-media users, "the interacting and interacted" (Castells 2010, p.402) - those who actively pursue and determine the cultural artefacts they consume and those who take a more passive role, simply, for example, *watching what's on TV*. Of course few are entirely passive; the notion of the *interacted* in relation to the internet is weak, considering that one must make a decision about what website to visit before content can be found[26].

What does Castells tell us about P2P file sharing? P2P networks are virtual communities that facilitate a new level of agency in cultural consumption, self-defined interaction sites built around shared purpose, while being part of overall trends towards "globalisation and decentralisation" (2010, p.357). However, beyond evocative descriptions and contemporary historiography like this, the theoretical generality that guides Castells' empirical dissection of the present does not provide a robust enough analytical framework to look at P2P file sharing structurally and for this reason I've chosen to use Niklas Luhmann's social systems theory to examine P2P file sharing. While Luhmann does not explicitly discuss P2P file sharing, his theory is a powerful framework and, although unintuitive initially, it has huge scope for offering new insights beyond the conventional interpretations of CCV under scrutiny in this thesis.

## 2.6 Luhmann's social systems theory

Luhmann's social systems theory has a powerful and elegant explanatory force which is troubling for many readers due to its almost alien treatment of human beings. For Luhmann, society is not composed of individuals as in the popular conception of society. Rather, it is made of complex internally coherent, functionally differentiated communication systems with specific relationships to one another. The core of Luhmann's theory is communication; society itself is a communication system. Societal subsystems exist because they are sustained by internal communication; society itself is communication (Moeller 2006).

Luhmann's theory is significantly influenced by the theoretical work of Humberto Maturana, a biologist who sought to improve the conceptual understanding of how cellular life maintains itself. Luhmann's systems have inherited a number of the characteristics Maturana applies to cellular processes. Autopoiesis (from the ancient Greek, *self-creation*) is the process whereby a system recreates itself by creating the requirements for its continued operation. Systems are also *operationally closed*, meaning they produce a boundary that distinguishes them from their environment. Operations within a system are closed from the environment but this does not preclude the system from responding to environmental changes. Systems mutually constitute the environment and individually they function to simplify communication to an intelligible level[27], outside of which much communication that has become integral to society would be impossible (Moeller 2006).

Although operationally closed to one another systems do interact by making changes in the environment which other systems react to. Relationships between systems become even closer as well through *structural*



26 Of course, there are established channels of information, for example the Google search engine. Many contemporary media theorists contend there has been a breakdown of the distinction between producer and consumer, giving examples of the lower production cost of the digital age and the distribution possibilities of the internet. While these things are true, the vast majority of internet users are in fact *users* rather than *producers,* even if they exercise choice in relation to the vast array of consumption options available.

27 For illustration purposes, from within the economic system everything is simplified into economic terms of market values and rates of exchange, even the value of people in terms of the market value of their skills and their spending patterns and potential. The economic system does not take into account any other aspect of life outside the realm of the economic which allows the economic system to be internally coherent and communicatively functional.

*coupling* where the autopoiesis of coupled systems becomes linked[28]. In Luhmann's terms, systems "irritate" one another and, in response, systems "resonate" negatively or positively (Moeller 2006, p.38). Irritation and resonance are the key forms of interaction between systems. Irritation is the state of stimulation systems enter in reaction to each other's outputs. Interest rate changes implemented by finance ministers in government are a good example of an output from the political system that irritates the economic system. For example, higher interest rates tend to slow economic growth because the economic system resonance takes the form of more conservative lending practices.

There are three types of systems in Luhmann's theory: communication systems, biological systems and psychic systems. Communication systems are the organs of society: economy, politics, law, science, religion, education, art, love, and the mass media[29]. Biological systems are human bodies, the vessels that contain our psychic system, our conscious mind (Moeller 2006). Luhmann is centrally interest in communication systems; biological and psychic systems are primarily significant as far they enable communication.

Part of the reason Luhmann is not interested in individual human beings is because of a distinction he makes, that "human beings do not communicate and cannot communicate – only communication can" (Moeller 2006). This sounds completely alien but it makes sense in terms of systems theory when one considers the relationship between the three types of systems. Together, communication, biological and psychic systems mutually constitute their environment but are operationally closed to one another. Biological systems are governed through nervous and chemical processes that respond to internal system occurrences, none of which the psychic system is necessarily aware of (e.g. the necessity for diagnostic medical processes when the biologic system malfunctions[30]). The two are functionally differentiated, unable to communicate (what is the expression of a physical state, say "I am cold", other than an interpretation of the current condition of the psychic system's environment? Consider the difficulty we often experience in articulating biological states) but nevertheless coupled. Psychic systems do not directly connect to one another; the biological system responds to the outputs of the psychic system and becomes the vehicle that, in conjunction with other biological systems in similar reaction to their respective psychic systems, constitutes communication. It makes perfect sense that one does not really communicate by one's self and further, within the framework of systems theory, only communication communicates (Moeller 2006). This is, however, just an explanation of Luhmann's semantics as opposed to what these semantics allow us to see - societal systems as autopoietic, internally coherent systems in a continual state of irritation, resonating in response to one another.

All systems undergo a process of evolution and change in reaction to one another and, as a result of structural coupling, this has given rise to increased complexity that makes those systems more robust and intelligent in their reactions to their environment. Communication systems are no exception to this. Modern

28 For example, the mass media as a system is partly coupled with the economic system through advertising; advertising money is a functional economic necessity for news media to generate their products. That product contains numerous economic propositions that encourage continued economic communication, hence the autopoiesis of the two systems is linked to one another.

29 There are other communication systems but these are the ones most discussed by Luhmann. Even though Luhmann himself has not spent time discussing every aspect of society from the point of view of systems theory, one of the advantages of a theory as complete as systems theory is that once one is reasonably familiar with the basics of the theory, it is relatively simple to see how it applies to most scenarios.

30 Granted, through the psychic system's literal coupling with the biological, it has some sense of the state of the biological system through the nervous feedback the brain receives but the point about the separation between body and consciousness is made. This, however, is not a nod to Cartesian dualism; the mind is absolutely embedded in the biological system and must exert what control it does have over the biological to become part of communication.

communication systems are reactions to the growing complexity of the environment of society. Modern social systems have developed a level of communication Luhmann calls *media* and which are a development beyond conventional language and help systems communicate efficiently (Moeller 2006). The best example of *media* is money, the *media* of the economy, used to facilitate effective economic communication.

P2P networks are, of course, systems in as much as they are networks (semantics again). In terms of Luhmann's systems theory, P2P networks form part of the mass media which, according to him, "include all those institutions in society which make use of copying technologies to disseminate communication" (Luhmann 2000, p.2). Mass media communication is distinct from other forms of communication in that there is no interaction between the creator and receiver of communication; communication is made into a fixed state for distribution to an undetermined audience[31] via a communication technology. P2P networks, of course, primarily communicate mass media messages that have already been produced[32]. All mass media communication is technologically enabled which is why, as a system, the mass media is the newest of significant social systems. Technology itself is not greatly discussed or theorised by Luhmann, it is simply part of the environment, aiding communication in society[33].

The idea that P2P networks are extensions or subsystems of the mass media is remark-worthy. Of course the autopoiesis of P2P networks is significantly dependent on the productivity of the larger mass media system to produce new communication which is then redistributed. P2P networks are kept viable and continue to reproduce themselves through the availability of new content. There are many entities within the mass media system, such as TV networks, that produce almost none of their own content, opting for syndication of content produced by others and, in much the same way, P2P networks are part of the contemporary distribution network. Syndication, of course, is a legally defined and enforceable economic agreement, while P2P networks are not singular legal entities and nor do they communicate economically (economically P2P consumption can be understood as non-payment).

Mass media as social system functions to create the common reality for other systems, notably psychic systems (Luhmann 2000). The reality it provides is a construction[34] made up of what the mass media select as information through their observations and mediated by the constraints of its relationships with other systems. This common reality is not a consensus on the world, it is simply the understanding of events and their meaning (sometimes conflicting) that is commonly used to describe the world. This process of



31 It is not implied by the word *undetermined* that producers have no idea who consumes their communications, it is rather that there is no clearly defined receiver. Of course media producers create communication *intended* to satisfy particular tastes but when one publishes a book or airs a television programme, one does not know exactly who will read or watch. Although also printed, legal text is specifically produced for those embedded in the legal system, and thus does not constitute mass media communication.

32 Although the vast majority of the material distributed through P2P networks is formally copyrighted works, this is not always the case. Some television media is being made for direct release through bit torrent distribution, bypassing the TV network business model. In 2010 a TV drama series called *Pioneer One* was piloted; its creators made one episode and are hoping to fund further production through the donation payment model famously explored by musicians Radiohead with the release of their 2007 album, *In Rainbows* (David 2010). See the *Pioneer One* website: http://www.pioneerone.tv/

33 The technological advances of the 20th century have affected all functional systems, especially the more prominent systems in modern society. Technology has, however, not altered the function of those systems; it has made communication faster and increasingly efficient but those systems still satisfy their functions – some better than others in the context of technical advance.

34 Luhmann's social system theory is a constructivist theory overall. He does not believe there is any objectively neutral reality. Scientific truth in this view is a construction and although science as a system functions to supply society with *truth*, we know the world through mass media despite our mistrust of it.

creating the common reality is part of the mass media's autopoiesis - through the continual selection of new information to replace old, non-information. It is worth noting that each functional system in Luhmann's theory creates its own reality (legal, economic, political, etc) through its operational closure but the common reality has an especially significant relationship with psychic systems.

Mass media are broken down into three *programmes* (arguably subsystems)*:* news, advertising and entertainment. In terms of this study, entertainment is the only significant programme of the mass media as society is not significantly in copyright conflict over news or advertising[35]. All communication stimulates/ irritates the psychic system, including entertainment[36], which functions as a sort of game for the mind, with its own boundaries and rules, and distinct from common reality (Luhmann 2000). Entertainment and media forms all contribute to the process of individualisation, in a way similar to that identified by Condry (2004) as significant for *millennial capitalism* (above). For Luhmann, individualisation is simply a novelty of a functionally differentiated society as opposed to a psychological truth about human life but it is nevertheless a force that drives consumption of mass media messages, whether through P2P networks or other channels.

While it is possible to discuss and illustrate systems theory at tremendous length, my aim in this last section has been to provide a brief sketch of Luhmann's work so that it might inform a systems theory analysis of my phenomenon of interest. I return to Luhmann after discussing the primary research I have performed.



35 News programming (not, however, the events it reports) and advertising can bear copyright but wide dissemination is scarcely a conflict for the producers of these communications.

36 Entertainment would encapsulate nearly everything distributed through P2P networks.

# 3. Methodology

## 3.1 Purpose and hypothesis

Narrowing down the scope of this project has been a challenge due to the complexity and number of narratives[37] surrounding P2P networking and CCV but centrally my aim has been to challenge both the normative and progressive copyright positions (outlined in my introduction) and to provide an alternate perspective of greater explanatory power on these phenomena. A better explanation will be able to look past the simplistic moral and legal interpretations, past the problematisation of P2P sharing because, as I have argued, *file sharing is a largely irrevocable development that must be adapted to*. With this in mind, problematisation of P2P file sharing becomes an exercise in self-frustration as opposed to elucidation.

I suggest that CCV is not a moral issue and P2P sharing is simply an emergent and advantageous mode of sharing cultural mass media products that the economic component of cultural production has yet to adapt to. The predilection which drives the dissemination of cultural artefacts from mind to mind through society is a structural feature of society and perhaps part of the nature of human beings.

Nevertheless, I have tested the moral sensitivities of file sharers to add weight to this argument. Similarly the notion that P2P network participation is somehow a political act (as suggested by the progressive copyright position) has been examined. I argue, as I have above, that it is closer to reality that file sharers are simply maximising their consumption through the practice of P2P network participation.

While there is much variance in the subjectivity of individual file sharer's experiences, there are patterns that I have I tried to explore empirically with the aid of literature, deduction and induction. For example, I began this study with the idea that P2P file-sharing behaviour was guided by some sort of specific moral praxis, a distinct moral code (something which appears to be untrue; see below). Deduction and analysis of my primary data show this not to be a wide experience of P2P file sharers.

## 3.2 Conceptualisation

### 3.2.1 Rationality

A significant part of my theoretical framework is the assertion of the rationality of P2P file sharing. What I mean by this is the limited, bounded sense actors have of maximising utility where they are confronted by choices. I take the concept of utility maximisation to include "rationality as means-end appropriateness" (Moessigner 2000, p.20) since I am discussing the meaning and implications of a means to an end. For clarity's sake, as long as a means can be seen to have been determined as reasonable to reach certain ends, one can consider it rational, although it may not have maximised utility in a given instance. Of course if one's aim were to maximise consumption of cultural artefacts then one would use the most reasonably efficient means available. It is worth mentioning means-end appropriateness as, due to the bounded character of our ability to behave rationally, we probably are never able to truly maximise utility when our actions are analysed in retrospect. Evidence of attempting to do so can be found in evaluating intent, the means as well as the outcome.

37 P2P file sharing raises significant questions for law, economics, media production as well as social science.

### 3.2.2 Norms and culture

The extent of a permissive sharing norm is a conceptual measure of proof of what I argue in this thesis. The normative influence may even extend beyond the rational motivations for P2P file sharing; as I have discussed, active rational deliberation seldom accompanies the decision-making process in routine or non-threatening situations. Once a sufficient number of people realise the utility-maximising potential of a behaviour it is only a matter of time before it is popularised and the original rationalisations become secondary to normative spread. In other words, considered practice becomes a rule of thumb. The reason for including culture alongside norms is that a culture of sharing is effectively synonymous with the permissive sharing norm in this study. Neither norms nor culture are natural or innate but social compulsion to continually seek out stimulus for the mind certainly seems to be prevalent in contemporary times.

### 3.2.3 Rhetorical weakness

I also theorised that the weak rhetorical position of the intellectual property industry is significant in the decision-making process of file sharers. Simply, the discernible gaps in the logic of the messages produced for social awareness of copyright issues are not difficult to detect, which appears to engender a general lack of sympathy for the intellectual property industry.

In summary, my conceptual measures are moral sensitivity, restraint in relation to law, rationally guided behaviour, the influence of norms/culture, and rhetorical weakness.

## 3.3 Research framework

With the aim of finding a better understanding of P2P file sharing, I would class this thesis as an inductive exploratory research undertaking in that I have tried to explore the significance and meaning of P2P file sharing. It is also an explanatory study in that I seek to explain P2P file sharing through exploring it.

Due to the exploratory nature of my research my design has been quite reflexive and iterative, resulting in an evolution into a triangulated case study involving a handful of one-on-one interviews, a focus group and a small-scale survey. In theory, triangulation allows one to make up for the limitations of one method by combining a few in a research design to try to get a fuller and more valid perspective (Brinberg & McGrath 1985).

In design conception I have used Brinberg and McGrath's Validity Network Schema (VNS) from their book, *Validity and the Research Process* (1985), an approach to research that is sensitive to both internal and external validity throughout the research process. The VNS model allows researchers to look at research design at the meta-level above their paradigm and choice of methods; a most fruitful exercise. The VNS model achieves this by breaking down the components of research into conceptual spaces, the largest of which are the *substantive*, *conceptual* and *methodological* domains. Aspects of these three domains are inevitably combined in any research undertaking.

The substantive domain refers to the real-world phenomena that are often the focus of study. The conceptual domain is the realm of abstraction which helps us decide what our findings mean and how they fit into broader perspectives on the world. Lastly, the methodological domain encompasses the means of collecting and creating primary data (Brinberg & McGrath 1985). In these terms, my research began at the intersection of the conceptual and substantive in observing significant flaws in many conceptual frameworks I had

observed in relation to the substantive reality of P2P file sharing and CCV. Through exploring my topic substantively I decided early that proof of harm from P2P file sharing is doubtful and also a less thought-provoking approach than examining the conceptual and social significance of such sharing. Through the interplay between secondary sources relating to the substantive domain, I began to consider how I might add to and test the perspective that I had been developing (thus linking up with the methodological domain).

These domains are further broken down into three sub-components: *elements*, *relations*, and *embedded systems*. *Elements* are the objects and units within a domain; substantive objects are the "states and actions of entities" (Brinberg & McGrath 1985, p.33). *Embedded systems* refers to the environment, the broader context or boundaries of the research context (a case, for example). The term *relations* is used quite literally to denote relationships between elements and with their environment.

Substantively, my elements are individual file sharers and their acts of CCV which are situated broadly in a file-sharing network (explained in full in the next section). Within this context, my focus is on the social and technical relations within this network. Luhmann's social systems theory is an example of the conceptual domain in Brinberg and McGrath's VNS schema; its elements are individual systems (social, biological and psychic), its relations are the couplings, irritations and resonances Luhmann attributes to systems and, finally, the embedded system is the broader perspective of systems theory. The methodological domain is broken down as follows: elements are measures or "modes of treatment" (Brinberg & McGrath 1985, p.17) we use to determine the state actions of entities of interest", relations are the techniques used to compare elements, and embedded systems are the overall methodological strategy. As a final illustration, an element in a survey could be an ordinal or ratio value we apply to an attribute belonging to an element in our substantive domain. Relations are the means by which we compare and combine elements into models aimed at testing a relationship or predicting something (e.g. variable association tests). The overall practice of quantifying and statistically analysing data would be the embedded system in this regard.

The particular semantics of the VNS model itself are arbitrary (other nomenclature could substitute) but the value, as I've said is that it gives an overview of a research design from outside the design. As a research process builds up from a domain it acts as filter for what is selected from the other domains, resulting in a research path that is hopefully geared towards a high validity outcome.



## 3.4 Case selection

It was difficult at first defining a case or cases because CCV is widespread and not limited to any particular group, so having a rationale for the boundaries of my research was challenging until I realised I could use what was right under my nose: university students. The choice was not for lack of deliberation or necessarily for the sake of convenience, as it is for many brief experiments where the choice of respondent isn't too critical. Copyright violation is not just casual for university students; it is habitual and sometime gluttonous (in South Africa and in university campuses around the world).

University students display a number of characteristics that make them likely violators of copyright law in favour of the benefits of file sharing. Firstly, they are part of a social group that has grown up in the context

of the expansion of computer technology[38], making them either confident and capable computer users or at least part of a peer group that can support them in whatever technological difficulties they may have. Most university students, despite their social backgrounds, live on tightly constrained budgets, making them price sensitive to nearly everything - after the considerable costs of tuition and living expenses they typically have little to spend on non-essentials like entertainment. Undergraduate student life is also typically punctuated with a good deal of free time (including holidays) to fill and this, coupled with a strong desire for the entertainment of contemporary cultural artefacts (as part of individuation as I've suggested, or simply as a pastime), makes university students very likely file sharers. This strong desire for culture goods is also arguably linked to the recent historical trend of cultural industries increasingly catering directly to the tastes of the teen and early twenty-something market (Osgerby 2004).

Popular P2P file sharing had its genesis in universities. Napster creator, Sean Fanning was a computer science student and Napster use spread first through other computer science students (David 2010) and then presumably through their peer groups and ballooned from there. This genesis of university campus file sharing shows the University of Cape Town's (UCT) file-sharing network to be quite typical, as it is also maintained by computer science students (explained below).

UCT, like any large organisation, has a hard-wired intranet[39] cable network that links all computers on its campus, including computers in student residences. This network is maintained to facilitate the information and communication technology (ICT) needs of UCT but this kind of network is also ideal for using as a backbone for *DirectConnect* networks (Wang 2004), which is exactly what is in practice at UCT and university campuses around the world. A *DirectConnect* (DC) network is a centralised server-based file sharing system where users employ software called a *DC client* to connect to *hubs* (servers) which index user share contributions, process search requests and directly connect users for file transfer. DC networks are often governed by rules of minimum share amounts measured in gigabytes to ensure a good base of files as well as some degree of reciprocity. DC clients have a built-in chat feature to facilitate communication between users. DC networks are not restricted to intranet use; there are DC hubs whose user base connects via the internet (these hubs are often themed by content) but an intranet is an ideal DC network backbone because download speeds are very fast since data is transferred at the rate that the cable network can copy data rather than the speed of an internet connection[40].

The selection of UCT's DC network as a case study served two principle purposes: it is easy to access and it represents a discrete population, delimited by geography (making it a discernable case). By contrast, most P2P file sharing has no geographic boundaries due to the de-centralised nature of P2P software and the

38 This is not to argue that people who did not grow up with computer technology are always less computer literate and therefore not engaging in CCV; technological enthusiasm and the related literacy in the mechanics of reproducing cultural artefacts is certainly not limited to any age group. There are, however, easily observable differences in levels of computer literacy and confidence between those who've grown up with computers and those who've had to adapt to computer technology as they have increasingly become part of almost every aspect of human life.

39 '*Intra*'-net as opposed to '*inter*'-*net:* a private computer network that uses IP technologies to securely share information and resources throughout an organisation. An intranet is independent of any of the capacity provided by ISPs, thus any service facilitated by an intranet will work despite internet connectivity (e.g. data transfer between computers connected to an intranet).

40 Internet speeds in South Africa have been historically slow, (and well below technical capacity) as illustrated by a media stunt engineered by a Durban-based IT company that tested the difference in data transfer speed of their internet connection against a carrier pigeon with a 4GB flash drive attached to its leg which flew between Hillcrest and Howick (Ottermann 2009). The pigeon won convincingly, displaying both the inadequacy of South African broadband for professional application, let alone P2P file-sharing traffic (which is typically de-prioritised by ISPs).

internet, but in terms of studying P2P file sharing it is very useful to have an accessible population with defined boundaries. Despite this difference, I did not anticipate that UCT's file-sharing population would have a significant number of characteristics that would distinguish it from file sharers generally, other than its generational character, which would be comparable to most universities. UCT's DC P2P network has proven to be a useful boundary to establish a case for this study.

## 3.5 Qualitative design and operationalisation

### 3.5.1 One-on-one interviews

The interview component of this research project comprises four one-on-one interviews. Respondents were selected purposively because they were considered and reflective in their file sharing and because they were users of UCT's DC network. Respondent A's interview was conducted early in the research process as an exploratory exercise, prior to much secondary research. As a result the question schedule used varied from that used with subsequent respondents. However, this variance was not significant and the value of respondent A's interview data made it important to include.

Due to the exploratory nature of the project, I took a fairly open approach to the interviews, using a "general interview guide" (Patton 2002, p.342) to keep me on topic and make sure I was getting relevant information within limited time. The interview guide (see Appendix A) used was developed from much of the attitudinal research literature that I have reviewed and through the conceptual framework I've developed. The interview guide took the form of a point-form guide to keep interviews on topic, ensuring coverage of topics within a reasonable time, not necessarily in any particular order. A lot of interesting information was derived from the interviews and became part of the process of planning the focus group and survey.

### 3.5.2 Focus group

Focus groups are a good method when "seeking a range of views on a topic" and when exploring "new insights or unanticipated issues" is beneficial (Hennink 2007, p.10). Alongside being a good exploratory method, a focus group suggested itself because, although my one-on-one respondents were mostly reflective about their file sharing, some of them had not verbally discussed file sharing before my conversation with them. I correctly anticipated the same being true of other respondents as well. A focus group became a good mechanism for allowing respondents to form positions and opinions in reaction to one another. The results of the focus group also became part of my planning process for the survey.

The focus group comprised five respondents selected haphazardly from first-year sociology tutorial groups convened by me. All participants engaged in CCV and had experience of the DC network[41]. Despite being haphazardly selected, the group was reasonably varied in terms of the socio-economic groups present at a South African university, comprising: white and black students; female and male students; South Africans and international students; ages 19 to 22; and considering themselves to be from families of average to

41 The fact that that a single haphazard group of five students all had experience of P2P participation is possible evidence of the prevalence of CCV amongst the student population. It is also probable that those who engage in CCV would be more interested in participation in a focus group on the topic.

above-average financial means[42].

I employed a questioning route (a planned, worded series of questions - see Appendix B) developed from my one-on-one interviews and my conceptual framework (Hennink 2007). A *topic guide* is more flexible but, within a defined conceptual framework and with specific ground to cover, I deemed that specific questions would help control the flow of discussion and help me get at the information I was after. Question phrasing also helped keep my own intervention as moderator smooth and clear for participants. My questioning route followed the "funnel design" (Hennink 2007, p.50) typically practised in focus group design, with questions progressing from general discussion stimulus to more specific, directive questions and returning again to broader questions that put the discussion in perspective, drawing it to a close.

To start the focus group process I played the "you wouldn't steal a car" awareness campaign video, discussed by Loughlan (2008), to my focus group as a stimulus for discussion of the normative copyright position and it proved useful. Overall, both the one-on-one interviews and the focus group were successful. The resulting data allowed me to map and describe the experience my respondents had of file sharing, copyright issues and their feelings in relation to arguments about file sharing present in the public sphere. A good deal of this qualitative data was not entirely new information but it is certainly valuable grounding for many of my assertions.

### 3.5.3 Qualitative data processing and analysis

In the case of both the one-on-one interviews and the focus group, audio recordings were made with the permission of respondents for later review and transcription. All interviews were transcribed for analysis and comparison. The analysis that follows is a summary-style analysis, organising and prioritising information to bring out the most significant trends and salient points. The results of this analysis follow in section 4.

## 3.6 Quantitative design and operationalisation

### 3.6.1 Online survey

While the practice is not yet very common in academic research and perhaps unestablished in the minds of many researchers, I decided to conduct my survey using an online system (not, however, with a lack of concern about the criticisms and concerns about online surveys). In the specific circumstances of this research project, dealing with computer-use-related behaviour, the use of an online survey is actually a logical and advantageous choice.

The central problem identified with online surveying is that in most cases it introduces a particular selection bias. The respondents one can reach are limited to the number of people who are internet users or to the number of households that have internet access, which creates sampling and representivity problems (van Selm & Jankowski 2006). The profile of the average internet user in the world has historically been white, male, educated, urban and professional, which also typically introduces bias (De Vaus 2002). Neither of these factors affects my survey because whatever the characteristics of the population surveyed, the action of participation in UCT's DC network is what defines my population. Also, although the racial composition

42 This and other information was established through a brief survey of focus group participants completed before the focus group - see Appendix C.

of a university varies (UCT's being predominantly white and black[43]), university student populations are typically middle class and in the process of becoming professionally educated and thus are homogenous in many respects.

Online surveys also eliminate interviewer bias (van Selm & Jankowski 2006), which is a positive. A consequence, however, is that removing the researcher from data collection can raise concerns about a lack of interviewer quality control resulting from lack of thoroughness, care and accuracy in the efforts of respondents. This, however, is a feature of postal surveys as well, which have a longer proven history as a method and both postal surveys and online surveys give the respondent as much time as is needed, as opposed to researcher-administered surveys. Quality of responses can also largely be controlled by controlling the length of a survey - the longer it is the more likely respondents are to lose interest or to speed through the end of the survey (van Selm & Jankowski 2006). In the case of this research I tried to keep the maximum required response time to no more than 15 minutes. During my piloting of the survey, the average completion time was 12 minutes, the shortest being 10, which I decided was probably acceptable. In retrospect, I solicited more information than I had time to discuss in practice so a shorter survey would have been acceptable.

The survey was made significantly possible through the help of respondent D, whose role as a DC network operator[44] made it possible to advertise the survey on the DC network (See section 4 below for more information about respondent D). Respondent D offered to help by advertising the survey through the DC network's internal messaging system where an unavoidable message pops up on the DC client interface with a link to the survey (which is easily dismissed for continuation of other activity). We agreed on a schedule of several adverts a day at different times for about two weeks[45], so as to catch the widest group possible. I personally logged onto the DC network to promote the survey as well through private messages and public chat messages, as well as to verify the advertising by respondent D.



### 3.6.2 Incentivising response

I anticipated that sufficient response would be a difficulty and decided to attempt to boost response through a lottery-style prize attached to the survey. On the last page of the survey was an optional field for entering an email address to win a cash prize of R500, which I deemed to be not so attractive as to encourage active subversion of the survey process but attractive enough to boost response. The possibility of attempts at repeated entry was easily identifiable during the data-cleaning process and, interestingly, there were no repeat email addresses[46]. It is difficult to know whether response was increased through the incentive as the response rate was poor overall, with 188 responses (poor response rate is discussed in more detail bellow). The competition itself had 166 unique entries.

The prize was drawn by generating a random number between 1 and 166, then finding the matching survey case's email address. The winner was notified by email and responded within the time frame in the rules of

43 Source: South African Education Department Higher Education Management Information System (HEMIS) 2007 report (2008 October). http://www.uct.ac.za/usr/ipd/dept/escan/2007EnrolmentsDemographicProfileAllHEIs.pdf

44 All networks (P2P or otherwise) have technical functionaries and facilitators. UCT's DC network is maintained and moderated by *operators* ('*ops*' in colloquial abbreviation).

45 The survey continued for about 3 weeks in practice.

46 It would have been possible for respondents to have entered more than once by using different email accounts but, on average, most people only have a maximum of two email addresses (work and personal) and the labour of going through the survey process again to fill in another email address just for the slightly improved possibility of winning R500 seemed unlikely.

the competition (see Appendix F). The prize was duly award as promised.

Lastly, I promised respondents access to survey summary information as an added incentive and, as it turned out, many expressed an interest in this, finding the survey to be a thought-provoking exercise.

### 3.6.3 Design

The question-design process involved incorporation of the information derived from the interviews and insight from the attitudinal studies (in my literature review), into a series of questions aimed at profiling the DC population as well as gauging a number of tendencies therein. Due to the non-probability sampling inherent in this method of survey, I decided to include a section on demographics to compare with student demographics to assert some level of representivity in the case of poor response. The following three sections of questions dealt with patterns and level of involvement in P2P sharing, the reported effects of P2P sharing on market-based consumption and, lastly, general attitudes towards file sharing, copyright, theft and the possibility of causing harm (see Appendix D for the survey questions).

All questions were multiple choice with the exception of two open-ended questions. Most of the opinion question responses were designed along degrees of intensity, creating a scale between two absolutes with a range of positions in between. Where possible, a Likert scale was used to simplify data processing and comparison of strength of opinions.

### 3.6.4 Operationalisation

The survey was put together using a component of Google's internet office suite, Google Docs[47], called a "form". A Google form is a simple web-based questionnaire development tool which allows users to develop a questionnaire from a number of possible question formats including multiple choice, open response questions and Likert scale-style ranged-response questions. The form was embedded in a purpose-built website (see Appendix F for site content) which introduced my research topic to potential respondents and directed them to the survey. Forms automatically collect time-stamped responses into a spreadsheet, eliminating both the labour of data entry associated with conventional surveys and the introduction of error through data capture.

### 3.6.5 Poor response rate

The poor rate of response to the survey seemed to be at least partly caused by suspicions and fear on the part of DC users about the survey and its purpose. Most members of my sample were well aware they were doing something illegal by file sharing (91%), which is also against university policy. While responses initially snowballed for a few days, they quickly started to taper. Through my own efforts in trying to promote the survey, I discovered a growing number of users suspected the survey to be a covert attempt by UCT's Information and Communication Technology Services (ICTS) to find and take action against violators of university policy. This fear was partly informed by the suspicion that the demographic questions where too targeted, even though they were only able to narrow down to age, race, nationality, level of qualification, faculty, residence and a subjective measure of familial wealth. Similarly, the lottery prize was interpreted as a lure into danger as well.

47 http://docs.google.com

It seemed as though the spread of these suspicions worked against response, despite the implicit endorsement and vetting by an operator. This is certainly a lesson regarding dealing with deviant[48] populations; perhaps asking for less demographic information or making answers to the demographic questions optional, would have improved response.

### 3.6.6 Representivity

Despite the low response rate, I was able to assert some degree of representivity through comparison between UCT student population demographics and the demographics of my sample. Through the following tabulations one can see that, despite being a small non-probability sample, my sample closely represents UCT's population in respect of gender, race and faculty enrolment.

**Table 1: Comparative sample representivity by gender**

| | **Female** | **Male** |
|---|---|---|
| Enrolled at UCT for 2007 | 49.87% | 50.13% |
| Sample | 39.65% | 59.35% |

Source: South African Education Department Higher Education Management Information System (HEMIS) 2007 report (2008 October). http://www.uct.ac.za/usr/ipd/dept/escan/2007EnrolmentsDemographicProfileAllHEIs.pdf

**Table 2: Comparative sample representivity by race**

| | **Black** | **Coloured** | **Indian/Asian** | **White** |
|---|---|---|---|---|
| Enrolled at UCT for 2007[43] | 30.32% | 15.17% | 8.66% | 45.86% |
| Sample | 28.72% | 9.04% | 12.76% | 49.46% |

Source: South African Education Department HEMIS 2007 report.

**Table 3: Comparative sample representivity by faculty**

| | **Commerce** | **Engineering** | **Health Sciences** | **Humanities** | **Law** | **Science** |
|---|---|---|---|---|---|---|
| Enrolled at UCT for 2007[2] | 27.39% | 19.45% | 15.34% | 33.24% | 4.57% | 13.32% |
| Sample | 16.48% | 21.8% | 7.97% | 31.91% | 2.65% | 19.14% |

Source: UCT Faculties Report 2008-2009. Institutional Planning Department. October 2009. http://www.uct.ac.za/usr/ipd/IIU/intreports/facreports/Faculties%20Report%20all.pdf

While reasonable comparative similarity between my sample and UCT's population can be seen, this does not mean that my sample represents UCT's DC network population accurately. The DC network's population is drawn from UCT's student population but that does not mean that the DC network user population reflects the student population demographics. Despite this, UCT's student population and the DC network population are homogenous in a few crucial respects: they have access to computers (the means for reproduction of digital objects), use copyrighted material and, in so doing, must navigate the boundaries of intellectual property. There is probably a reasonable likeness between the demographics of the overall student population and those of the DC network population.

48 In this case, deviation from the law and from organisational policy, not social norms.

The DC network's population is estimated by respondent D to be around 3 000 - deduced from a record by hub operators of 2 500 registered users (registration is optional and not personally identifying) and an educated guess of around 500 further users. IP addresses are logged by the operators and computer lab computers are used to access the network, but each computer lab terminal has any number of users so an exact number is hard to gauge. This would make my sample around 6.5% of the total DC network population, assuming the population is around 3 000.

## 3.7 Research ethics

In any study involving human subjects it is appropriate to discuss the ethical implications of the use of such subjects, especially when a study deals with an illegal behaviour as mine does. It has become customary in social scientific study to attempt to respect the rights of participants, especially the *right to privacy* (Kimmel 1990). However, as I have argued in relation to property rights, we have only rights that can be enforced. Still, I desire no harm to come to any respondents as a result of anything they have revealed to me (even though the information is completely circumstantial and unlikely to prove anything legally). As a result, in line with common research practice and out of gratitude for their participation, I have kept my face-to-face respondents anonymous and did not solicit any specific personally identifying information from my survey respondents[49]. As a result I do not know the identities of my survey respondents. It was, naturally, necessary to meet the competition winner to hand over the prize but the winner will be treated as anonymous, affording similar protection.

See Appendix E for the consent-form agreements I used both for one-on-one interviews and the focus group. In the case of survey respondents, I explained the research project and what I was asking for and assured the respondents about their anonymity. In the next section I discuss the results of the analysis of my data.

## 3.8 Data processing and analysis

The data from the survey was imported into Excel for cleaning and coding, and then exported into Stata for analysis and cross-tabulation. Although the analysis presented in what follows does not include any statistical tests, the agility Stata provides in examining data made the process worthwhile.

Section 4.3 below contains the most salient trends that emerged from the survey data. As stated before, since the survey was exploratory it asked a broad range of questions. This range was large to the point that I have not had the space to discuss all the questions in the survey in detail.



49 I did solicit a list of email addresses but email addresses unaffiliated with organisations are not necessarily personally identifying. The list of email addresses has been disposed of.

# 4. Analysis

## 4.1 One-on-one interviews

### 4.1.1 Respondent A

As already discussed, respondent A's interview occurred early in the research process as an exploratory exercise. Respondent A is an American who was doing a masters degree at UCT and who, like millions of Americans (and others around the world), started using Napster in 1999 and had been a fairly persistent file sharer since. Respondent A had some interesting views, especially when it came to his own framework of deciding whose products he should buy and whose products were acceptable to copy without payment. This boundary that respondent A established was informed by perceived market dominance and the imperceptibility of harm towards particular producers (whether large software companies or successful musicians). The distinction between stealing a commercially produced instance of a music recording and downloading a copy was nicely illustrated by him:

*"A lot of people ... would never actually go into a CD store and actually like steal a CD. But you know... on the internet, ripping or downloading doesn't seem bad at all. I think part of it is that technology obfuscates the real issue. ... You're not actually going into a store and putting a CD in your pocket and walking out, you're just sitting in front of your computer, doing what you always do, going on the internet, downloading this and that. It doesn't seem like it has that same taboo sense around it. There is no camera on you, there's no one telling you, 'you can't do this, if you do this you'll be arrested right now'. You know, like... there's none of that immediate threat."*

Respondent A reported consumption patterns including P2P sharing from home, using a network similar to UCT's DC at his undergraduate university campus as well as a period of purchasing music made by some lesser-known musicians from a legal source, iTunes, during a period of full-time professional employment. Although he made his own subjective justifications for who he ought to pay, his spending on music was partly governed by the marginal utility of the expense, which was higher when he was as student and lower when he was earning a reasonable salary.

Respondent A's subjective experience similarly told him that the apparent wealth of producers and his sense that he could not truly make an impact on them through non-payment made downloading music for free off the internet acceptable. He explained that this comfort had a lot to do with the setting - there is a clear distinction between what you can do in a retail environment and what is acceptable sitting in front of a computer. He conceded that perhaps this difference had something to do with different levels of risk but even in the hypothetical absence of risk, he said he would not take a physical artefact without paying.

Respondent A interpreted the pervasiveness of P2P file sharing by his generation structurally, suggesting that although people of his generation were aware of and subscribed to the normative demands of the market, the setting of the internet is not a space that his generation associated with market relations.

The central point I took from respondent A is that P2P file sharing for him was a pervasive norm, reinforced by convenience and formative experiences using the internet, raising the question of how widespread is the sense of the internet as a space unrelated to the market. Respondent A suggested that this perspective must be more pervasive among people younger than him because he was in high school when he first used Napster and it was then widely greeted as an alternative to "spending $15 on a CD". In the case of younger people,

respondent A felt their formative music experiences may have been with free instances of the MP3 format rather than CDs.

### 4.1.2 Respondent B

Respondent B is a Zimbabwean studying at UCT. Zimbabwe, like many poor countries in the world, is a black hole for intellectual property in that the pirated market dwarfs the official market for cultural goods. Respondent B said he had never spent money on cultural artefacts as a result of not growing up with a lot of money and often having a source for copies of the cultural artefacts he desired (currently UCT's DC network). Respondent B did not profess any moral sensitivity towards the illegality of P2P file sharing, making a strong personal distinction between living his "life according to the laws of the country" and doing so according to his own morals. The only moral wrong for respondent B would have been to make money through commercial piracy as in his mind, "it is distasteful to make a profit from someone else's work".

Respondent B made the peculiar suggestion that the issue of P2P file sharing is a conflict of "communism versus capitalism", a proposition that after some interrogation seemed to mean conflict between communalist consumption of cultural artefacts and the profit drive in society's economic underpinning. For him this distinction was an explanation for how people behave, relating to their interests and sensitivities. Those who have a vested interest in copyright or feel sensitive to arguments about economic stability will tend towards buying cultural artefacts and those who don't will be open to bypassing the market to get what they want.

Overall, respondent B was highly relativistic in his views. He denied any sense of subjective sensitivity toward the economic difficulties faced by cultural artefact producers, even in relation to cultural artefacts of his own preference. For him, piracy was a constant, a market force that must be adapted to which makes the decision to avoid copying cultural artefacts a moot point and empty moral high ground. In contradiction to his dispassionate position on CCV, respondent B conceded that he cared about the possible negative impact of P2P file sharing but emphasised his lack of personal sense of responsibility (it seemed perhaps his concern was more for the future availability of cultural artefacts than for the industry or individual creators). This perspective might be argued to be evidence of a none-too clearly thought out, subjective justification for negligent behaviour. I would suggest alternatively that respondent B had a sense of the structural regularity and persistence of P2P file sharing which is something that would continue despite him and despite UCT's DC network.

Respondent B conceded that his reasons for using p2p networks were convenience and the restrictive cost of cultural artefacts. Leaving convenience aside, students in respondent B's position have few other avenues to consume cultural artefacts on the scale that he desires. Respondent B also said he felt the sampling[50] justification of P2P file sharing was weak and he has a point; many types of cultural artefacts are single-consumption experiences for most people (with the most significant exception of music). Respondent B questioned whether many people would willingly spend money after experiencing a cultural artefact for free, even if the experience was positive.

### 4.1.3 Respondent C

Respondent C is a network operator for UCT's DC network. This means he has taken on part of the

50 The practice of trying products before buying.

responsibility for maintaining the DC network. The role of operator appears to be passed on primarily between computer science students who reach a certain level of interaction as DC network participants.

Respondent C's view that file sharing is acceptable was significantly based on two factors: the rhetorical weakness of the intellectual property industry and his scope for arguing the absence of harm in file sharing (which is a significant premise of the overall rhetorical weakness argument). File sharing, according to respondent C, "only eats into income if you would have bought it in the first place". On this logic, no harm can be asserted in as much as downloading copyrighted goods from P2P networks is consumption maximisation rather than a substitute for market consumption. This argument relates to both a willingness to accept the market price of an artefact and how much expendable income is available. The decision to acquire an artefact requires less deliberation as price tends towards zero, thus the likelihood of consumers acquiring cultural artefacts will tend to increase[51]. In relation to expendable income, the finite capital available to consumers will limit the money they can allot to what is at most a secondary priority after satisfying basic biological necessities and other rudimentary comforts. Respondent C's justification of his own file sharing stems from limited finances; for him it was a temporary convenience that facilitated his consumption of cultural artefacts while a student that would change when he earned more money.

Another interesting point raised by respondent C is what I call *secondary market compensation*: using P2P file sharing as a way to get access to cultural artefacts not conventionally available in a country like South Africa. It seems the growth of the internet has contributed to primary market consumption standards amongst people like respondent C which the local market does not meet. For example, many TV programmes will either take at least several months to be licensed by a local TV service provider or it may not happen at all. In the case of P2P networks, episodes of TV series are available to download shortly after their first airing in their home country. This is a strong example of Castell's description of globalisation and the growing agency in the consumption of cultural artefacts that the internet provides (2010). In terms of secondary market compensation, respondent C asserted the absence of harm, arguing that the producers of cultural artefacts, on first release of an artefact at least, are not even attempting to cater to his preferences[52].

Respondent C fundamentally conceded to the value proposition of the market; by consuming a product, you concede to its value and ultimately (in his mind) should pay for it. As a result he found many common arguments that justify or excuse file sharing to be weak: claims of the wealth of the producer, the idea that pirated music distribution is free publicity (sampling effect), and expressions of contempt for the producers and capitalism generally. He did, in contrast to respondent B, find sampling to be a reasonable justification for file sharing, which is how he classified his own file sharing.

### 4.1.4 Respondent D

Respondent D, like respondent C, is a network operator and a key respondent who helped make the survey

51 Our priorities in regard to market consumption are greatly governed by price. If price is somehow eliminated from a marketplace (as it is on a P2P network), a larger array of goods becomes attractive, considering that the only price involved is the time spent downloading and the hard drive space consumed in storage. Through P2P consumption many, if not most, file sharers will tend towards broadening the scope of consumption beyond what their market-based consumption would be.

52 The film and TV industries would argue that harm is done by pirating their products, whatever the case. TV and film industries have enjoyed extended and persistent profits from their intellectual property, entrenched by mechanisms like regional and format release schedules which have governed when a film will screen in a region in cinemas, when it will move into the rental and home video market, and when TV networks will be able to license it.

component of my study possible. Respondent D is also a computer science student studying at UCT. Respondent D's position on CCV and P2P file sharing is partly informed by his knowledge of South African law pertaining to copyright infringement, the prosecution of which, he accurately described as a "civil case". "So in that sense, I'm not really criminally liable, which is a big thing. It's not listed alongside fraud and rape and murder, etc… It's a civil liability. It's actually less worse as such than going into a shop and stealing something, you're not actually taking anything..." He was also careful to point out that when you do steal something from a shop, you're taking money from the shop's owners and a product away from a future consumer.

Respondent D's position was similar to that of C in that he was a self-proclaimed sampler, and specifically a collector of movies. He likened the idea of paying for something before you know what it's like to buying a car without taking it for a test drive. Respondent D suggested that an open-source approach to cultural production would offer a better reflection of the quality of cultural artefacts. In this alternative approach, people decide to patronise culture after experiencing, in contrast to the current system in which one pays first despite the possibility of disappointment. This latter system is misleading in a sense; purchasing a product is taken as an indication of its desirability but this is not always the case – there are many dissatisfied customers in the world. The approach advocated by respondent D might be a better reflection of public appreciation of cultural artefacts but it also represents a drastic absence of profitability assurance, a system unlikely to attract the investment that makes the contemporary scale of cultural production possible.

Respondent D made the interesting assertion that "something only has value if you try [to] sell it." Whereas in a retail environment individuals encounter the value proposition and prices of various goods, in a P2P sharing environment the economic value has been separated from the artefact. This highlights a significant question for intellectual property production: *does this altogether erode the economic value of their products*[53] ? This is a complex question and one that is not closely focussed on in this thesis but the short answer is, *no*, because whatever the degree of harm from CCV, the intellectual property industry is still in business despite the emergence of popular P2P file sharing 10 years ago. For respondent D it was not true that the value of cultural artefacts is eroded as he claimed significant expenditure on certain classes of cultural artefacts and thus, in his experience, his file sharing was not a threat to the market. It merely facilitated more immediate availability of what he was willing to pay for in the long term.

## 4.2 Focus group

Although they were interested in the topic and had all engaged in some level of CCV, the focus group respondents had scarcely considered or discussed their own copyright infringing activities (this was true for one-on-one respondents A and B too). The focus group was a stimulus to opinion formation as the participants reflexively considered the significance of their actions and the actions of their peer group in relation to the various propositions in the interview schedule. Discussing this all-too-common part of their lives was odd for a few participants, as if we were discussing something commonplace yet private, like their personal grooming habits.

Despite the novelty of discussing CCV, the respondents could easily and accurately see the difference

53 It is debatable whether this value erosion is necessarily broadly true. Gu and Mahajan (2005) show evidence that in the case of the software industry, there has always been a degree of piracy and non-profitable sharing which has had some positive sampling effects on some software products, helping to elevate them to their current market position. The best examples of this are industry-standard software packages which businesses cannot legally or practically afford to not to license.

between P2P sharing and stealing after watching the "you wouldn't steal a car" video - "I see it as the difference between sharing and taking. I mean you can copy a song but there's only one of that CD you're taking, so if you take it, it's technically the transfer of wealth. They lose something and you gain something." The intangible nature of files moving innocuously from computer to computer was also something they highlighted together as informing their comfort with P2P file sharing.

It became apparent that although all the respondents engaged in CCV, this wasn't their exclusive mode of consuming cultural artefacts. All of them felt some affection for material, commercially available products, including books and CDs with printed artwork. Some gave examples of music they discovered through P2P sharing that they later purchased as a result of discovering subjective value. Additionally, it was agreed that they felt more attracted to commercially available products when they felt there was some added value - unconventional packaging or something extra not usually included.

Interestingly, in contrast to respondent A, the focus group disagreed with the notion that file sharing was necessarily generational, citing examples of their parents asking them to find music or movies for them. From their perspective, what keeps older people from file sharing is not restrictive social norms but lack of technical expertise.

The focus group also illustrated Condry's (2004) point about the significance of consumption of cultural artefacts for individuation and peer group formation. As with young people in other Westernised parts of the world, the cultural artefacts consumed and exchanged by the members of the focus group were part of identity formation, serving often as the substance of social interaction. The cultural artefacts in the lives of the respondents were significant to them, as they are for everyone else.

In general, the focus group attributed their participation in P2P file sharing to social norms characteristic of people who have grown up[54] with the internet at the point that it could efficiently facilitate P2P file sharing. It was widely agreed that the convenience of sharing over networks like UCT's DC network was a key facilitating factor for them - file sharing is just easy. Some of them revealed a degree of discomfort at the thought that their CCV might be having a negative impact unknown to them. It was, however, clear that CCV was something that was part of their lives, something that was routine and unconsidered in the way most habitual, normatively influenced behaviours are (part of their *habitus*).

## 4.3 Survey analysis

As discussed above, the survey response was poorer than hoped for but not necessarily unrepresentative. Examining the data initially showed that of 188 respondents only 143 were DC network users, which indicated that 45 people outside the DC network completed the survey. The nature of the questions in the survey meant that it was not necessary to dismiss all these 45 responses since 23 of these non-DC users used other P2P sharing networks and 20 were face-to-face sharers. Only 2 respondents did not use the DC network, other P2P sharing networks or share copyrighted material face to face and so were excluded from the study. The other 43 non-DC users admitted to some form of CCV and can be deductively considered part of the extended beneficiaries of the DC network, given that their knowledge of the survey no doubt came from peers who use the DC network). As already discussed, using UCT's DC network as a case study was a convenient way of delimiting a group of file sharers with something more specific in common than

54 The average age of my focus group participants was 21, making them on average 10 or 11 years of age at the time Napster emerged.

merely being file sharers and in this light, the inclusion of a handful of other UCT students who engage in CCV should not greatly affect discussing the data as whole in relation to UCT's DC network.

The scope of the questions in the survey design was quite broad to facilitate some exploration as well as trying to cover the conceptual framework of the study. In the brief sections that follow I discuss the most salient pieces of information that can be distilled from the survey.

### 4.3.1 Sample profile

The average respondent to the survey had the following characteristics: male, white, South African, undergraduate, lived in student residence, registered in the humanities department, rated himself an above-average to advanced computer user, considered his immediate family to be of average to above-average financial means and, lastly, was an owner of a personal computer. This confirms much of what we know about the profile of internet users in general.

Other trends include a presumable correlation between living in student residence (Q1.08) and regular DC network access (Q2.03), with half of the respondents living in residence remaining permanently connected (it is both easy and convenient to do so). There is also a deducible correlation between frequency of access and the scale of use (Q2.08); the higher the frequency, the greater the scale of use.

Although not substantively indicative of much, I decided to ask question 4.03 to get a subjective measure of self-classification in relation to the survey respondents' file sharing: "Which of these descriptions apply to you?"

**Table 4: Self-classification of *DirectConnect* network participants**

| Question 4.03 responses | Freq. | Percent | Cum. |
|---|---|---|---|
| none of these, I'm a normal person. | 67 | 36.02 | 36.02 |
| File sharer | 65 | 34.95 | 70.97 |
| Pirate | 7 | 3.76 | 74.73 |
| Thief | 2 | 1.08 | 75.81 |
| Open Source Enthusiast | 45 | 24.19 | 100 |
| Total | 186 | 100 | |



Most respondents clearly did not consider their activities amiss or themselves to be out of the ordinary, while the second largest group conceded to the non-derogatory *file sharer*. It is not hard to imagine the avoidance of the label *pirate,* considering the connotations. On one level, the *open source enthusiast* response appeared to be an attempt to reframe P2P participation in a positive light; more significantly from the point of view of this study, this self classification served to avoid the normative dimension of file sharing by taking a philosophical stance that reframes file sharing[55].

With question 2.04, "Please rate these commonly shared items in terms of importance to you personally. Use the ranks, 'most important', 'somewhat important' and 'not important'. Items can share the same rank if they are equally important or unimportant", I tried to profile the level of importance of different categories

55 As already discussed in relation to the progressive copyright position, open-source software may be free and file sharing might make other things free in practice but the one is not illegal and the other is.

of commonly shared cultural artefacts and possible situational moral sensitivities to those categories (if any).

**Table 5: Importance of commonly shared cultural artefacts**

| Question | Class | Not Important | Somewhat Important | Most Important | Cumulative Importance |
|---|---|---|---|---|---|
| 2.04.1 | TV series | 6.99% | 32.26% | 60.75% | 93.01 |
| 2.04.2 | Movies | 10.75% | 43.01% | 46.24% | 89.25 |
| 2.04.3 | Music | 19.35% | 36.56% | 44.09% | 80.65 |
| 2.04.4 | Games | 61.83% | 31.18% | 6.99% | 38.17 |
| 2.04.5 | Software | 40.32% | 39.25% | 20.43% | 59.68 |

In question 2.04 respondents applied subjective ordinal labels comparatively rating the importance of the most commonly shared copyrighted artefacts available on the DC network. The most highly rated artefact type was TV series episodes followed by movies and music files which were quite evenly rated. The least important were software and games with games taking last place.

### 4.3.2 Piracy effects

Although I am arguing that the effects of piracy are beside the point, I nevertheless asked my respondents to rate how and if their consumption of free digital alternatives had affected their consumption of commercially available music (Q3.02), broadcast TV (Q3.04), movies (Q3.05) at cinemas, and games (Q3.06). The most significantly affected categories were music and games, with few respondents citing their P2P sharing having no effect on their commercial consumption. The most prevalent rating for each category (except for games[56]) was *decreased consumption*, indicating some combination of commercial consumption as well as P2P downloading. Although the questions do not establish what this balance is, it is notable that the group of DC network participants who combine P2P downloading with commercial consumption was bigger than the number who declared *complete substitution*[57]. The following tabulation summarises this information, adjusted to remove respondents who expressed no interests or consumption of these classes of cultural artefact:



56 In the case of games, the number of those rating decreased consumption was equal to those who reported buying all the games they played. Games, however, proved to be the least popular cultural artefact overall, with 102 of 186 declaring interest in games, making the rating of games possibly more circumstantial than the other categories.

57 This does not count those who reported P2P downloading while never having spent money on cultural artefacts. It is, of course, nonsensical to say that P2P participants who haven't spent or wouldn't spend money on cultural artefacts affect sales. However, the truthfulness of their responses is open to speculation.

**Table 6: A summary of the effects file sharing on commercial consumption**

| Question 3.02, 3.04, 3.05 and 3.06 summarised, respectively | Commercially available music | Broadcast TV | Cinema attendance | Game Purchase |
|---|---|---|---|---|
| Percentage of sample with no interest in this cultural artefact category (adjusted for). | 3.23% | 17.74% | 13.44% | 45.16% |
| Percentage rating 'no effect'. | 3.89% | 31.37% | 36.02% | 6.86% |
| Decreased consumption (some combination of downloading and buying). | 46.11% | 32.03% | 48.45% | 21.57% |
| Downloading replaced conventional consumption entirely. | 20% | 24.84% | 0% | 9.80% |

The following tabulation summarises an ordinal rating of the moral acceptability of sharing commonly shared artefacts on the DC network. The rating of *acceptable* was the dominant rating in all artefact categories, although there was clearly a sense that it was worse to not pay for games or software.

**Table 7: A summary of the acceptability of sharing different classes of cultural artefacts**

| Question | Class | Unacceptable | Less acceptable | Acceptable |
|---|---|---|---|---|
| 4.04.1 | TV | 5.38% | 10.75% | 83.87% |
| 4.04.2 | Movies | 6.45% | 19.89% | 73.66% |
| 4.04.3 | Music | 6.99% | 19.89% | 73.12% |
| 4.04.4 | Games | 9.68% | 26.34% | 63.98% |
| 4.04.5 | Software | 13.44% | 27.96% | 58.6% |

Respondents were asked to rate some common explanations for P2P file sharing participation ordinally, from *not applicable* to a *very good explanation*. All reasons suggested by question 4.01 had high rates of agreement, except for *sampling,* whose *good* and *very good* ratings aren't especially distinguishable from *partial* or *N/A*. When simplifying the data by collapsing the distinction between *good* and *very good*, you get a 70% positive rating for *convenience*, and most significantly *maximising consumption* and *early access* at 79% and 80% respectively. *Extended access* is also significant at a collapsed total of 76%, rating it a *good* explanation for P2P file sharing. The strong agreement with most of the rationales for P2P file sharing are significant conceptual indicators of P2P file sharing as a rational, utility maximising choice.

**Table 8: summary of prevalence of dominant rationales for file sharing**

| Question | Question phrasing | N/A | Partial | Good | Very Good |
|---|---|---|---|---|---|
| 4.01.1 | File sharing is the most convenient way to get what you want. I don't have to go to shop. DC is the fastest way to get what I'm looking for (*convenience*). | 8.6% | 20.97% | 32.26% | 38.17% |
| 4.01.2 | It allows me to try things before I buy. This way I don't spend money on rubbish (*sampling*). | 25.26% | 20.97% | 27.96% | 25.81% |
| 4.01.3 | File sharing is a way to get access to a lot more than I can afford conventionally (*maximising consumption*). | 6.44% | 14.52% | 27.96% | 51.08% |

| | | | | | |
|---|---|---|---|---|---|
| 4.01.4 | I don't have to wait for things to be available in South Africa; I can download things immediately after their release in the US, sometimes even before release dates (*early release*). | 8.07% | 11.83% | 24.19% | 55.91% |
| 4.01.5 | I get access to things that aren't commercially available in South Africa (*extended access*). | 9.13% | 14.52% | 25.27% | 51.08% |

### 4.3.3 Likert scale opinion questions

Most of the Likert scale questions employed reveal few strong or decisive trends in opinions, with the *undecided* category often being as large as *agreement* or *disagreement*. In the table below, the Likert scales have been simplified, collapsing ratings of 1 and 2 into *disagreement* and 4 and 5 into *agreement* so that trends rather than the relative strength of opinion are more visible.

**Table 9: Summary of Likert scale opinion questions**

| Question | Question phrasing | Disagree | undecided | Agree |
|---|---|---|---|---|
| 4.05 | "File sharing is stealing." | 41.39% | 31.73% | 26.88% |
| 4.08 | "The only important difference between file sharing and stealing from a shop is that there is a risk of getting caught when you're stealing from a shop. People download illegal copies of things because they think they won't get caught." | 45.7% | 16.13% | 38.17% |
| 4.09 | "I'm a student; I don't have money in my budget to spend on luxuries like entertainment. If I can't afford music CDs or movie theatre tickets, I don't really think I'm hurting the people who make them by downloading them for free." | 22.58% | 18.82% | 58.6% |
| 4.11 | "Cultural products like music CDs and movies on DVD or at the cinema are completely overpriced. As a result I don't feel so bad about downloading copies of these things for free". | 11.29% | 17.74% | 70.97% |
| 4.12 | "File sharing isn't bad for the music industry, its good. Every time you pass on a copy of an album or song, that's free publicity. If an album is shared a lot, it raises the public profile of the artist, positively influencing CD sales." | 22.58% | 27.96% | 49.46% |
| 4.13 | "I'm actually quite comfortable using software made by really big companies without paying for it, whether the consequences are good or bad for them. Monopolies are bad for economies and even if I did care what happened to giant software companies, enough people buy their products anyway." | 26.35% | 27.95% | 45.7% |
| 4.14 | "Major label music stars have enough money so I don't feel bad about not paying for their music. People like Jay-Z or Britney Spears have made millions which should be enough for anyone. You can't do any harm to these people by downloading their music for free." | 23.12% | 27.95% | 48.93% |

| | | | | |
|---|---|---|---|---|
| 4.15 | "I feel bad for local and small music artists, I think it's bad to copy their music free" | 18.28% | 20.97% | 60.75% |
| 4.16 | "These companies complaining about people 'stealing' their products are bunch of greedy capitalists. They are just trying to squeeze as much money out of people as they can. I don't care about downloading their products for free, even if it is stealing." | 32.26% | 31.72% | 36.02% |
| 4.17 | "I just don't believe that file sharing has any real consequences. Some argue it does harm to some industries, others argue it doesn't. I'll probably feel fine about file sharing as long I can't see it really doing any damage." | 25.8% | 26.89% | 47.31% |
| 4.18 | "An MP3 isn't something physical that you can touch. It's just there on the internet or on my computer. There's something about sharing things that physically exist that makes file sharing not seem like such a bad thing. | 30.65% | 19.89% | 49.46% |
| 4.19 | "Selling burnt CD copies of music as a business is not right because you're basically making money from some else's hard work" | 7.53% | 10.75% | 81.72% |
| 4.20 | "It bothers me when other DC users just download what they need and never contribute material that other people might want (leeching). Don't they realise the system works only if everyone chips in a little?" | 13.98% | 30.65% | 55.37% |
| 4.21 | "All my peers download stuff for free off the internet, it's just normal these days." | 5.37% | 16.14% | 78.49% |
| 4.22 | "Information should be free. That is all that file sharing is, setting information free." | 19.89% | 27.96% | 52.15% |



The strongest consensus amongst this group of questions was that commercial piracy is morally wrong, with 81.72% agreement. Following this, 78.49% reported P2P file sharing being the social norm in their generation, which serves to confirm my conceptual framework. From there, the last truly decisive majority is the 70.97% agreement rating that the cultural products discussed in the survey were overpriced.

Interestingly, question 4.05 ("File sharing is stealing") did not attract the disagreement one might expect from P2P network participants with 41.39% disagreeing and 26.88% agreeing with the statement. The spread of this question's response values is reflected by the results of question 4.07: "File sharing used to access copyright material is stealing according to the law. Many people argue stealing is immoral. What is your reaction to this claim?":

**Table 10: Reaction to file sharing as stealing**

| **Question 4.07 responses** | **Percent** |
|---|---|
| i. File sharing is stealing and immoral, just like stealing anything else. | 9.14% |
| ii. File sharing is similar to stealing but is not as bad so it's more acceptable. | 22.04% |
| iii. I'm not sure / undecided. | 21.51% |
| iv. Stealing is immoral and unacceptable but file sharing isn't really stealing so it's acceptable. | 39.78% |

| | |
|---|---|
| v. Stealing isn't that bad in certain circumstances and one of those is file sharing | 7.53% |

In question 4.07, respondents predominantly distinguished themselves and their actions from the undesirable interpretations of P2P file sharing, although there was a significant number who struggled to make these distinctions clearly. Question 4.08 is in the same vein and surprisingly, despite the moral judgment present in the question (which might have provoked a clearer trend), it is one of the questions with the smallest undecided rating; 45.7% were in disagreement with the statement. Those disagreeing with the statement in 4.08 sought to distinguish their actions completely from the socially undesirable comparison to material theft. Conversely, it is not clear that those in agreement with the statement necessarily believed file sharing is stealing; it is possible they rather identified their own risk-related sensitivities.

Although quite evenly spread (like many of the Likert scale questions), responses to question 4.06 show a good number of respondents were uncomfortable with the legal status of copyright infringement. Those who feel more conviction in their behaviour are quite a narrow majority, fitting in with the broad pattern that DC network users are not a uniform group in many of their opinions, despite their unity in action.

**Table 11: Reaction to illegal status of file sharing**

| Question 4.06 responses | Bothered | Unsure | Not Bothered |
|---|---|---|---|
| "Under current copyright laws, using file sharing systems to gain free access to copyright material is illegal. How does this legal status make you feel?" | 31.72% | 26.34% | 41.94% |



One of the ways of making sense of P2P file sharing at a university that emerged from the one-on-one interviews and which I tried to test was the idea that file sharing was a temporary measure to satisfy the entertainment requirements of students while they were financially constrained. Question 4.09 addresses this and at least 58.6% of respondents agreed with the sentiment of the statement. The follow-up question, 4.10 ("The statement in the previous question suggests that file sharers might change their behaviour and start buying things when they have more money. Please choose the most applicable response to this, and be honest") explored the future considered from the perspective of 4.09:

**Table 12: Higher earnings and their potential effect on file sharing behaviour**

| Question 4.10 responses | Percent |
|---|---|
| i. Even when I have more money I'll probably download things for free. Why pay when I can get it for free? | 13.44% |
| ii. When I am earning a salary I will buy a few more things than I do now but I probably won't stop getting things for free either. | 39.25% |
| iii. If I can afford it in the future, I will probably rather buy most things but might also download a few things for free. | 31.72% |
| iv. When my poorer days are behind me I'll stop copying and downloading things for free. | 15.59% |

Overall it seems the future constitution of the consumption of cultural artefacts for my sample will include legitimately purchased goods, as well as copies, in different measures. This is also partly corroborated by question 3.01 ("Leaving aside the fact that CDs and DVDs cost money and that file sharing is free; would

you prefer to own original discs with the commercial printed packaging?"), which was an attempt to gauge the possible affections of respondents for commercially available material products. Overall, there was no clear trend towards material goods (or their digital alternatives); there was, however, preference (55.38%) for owning the physical artefact when respondents were fond of the artefact in question (again, the subjectivity of the value of cultural artefacts).

**Table 13: Measuring affection for commercially produced cultural goods**

| Question 3.01 responses | Percentage |
|---|---|
| I always prefer owning the original discs with packaging. | 22.04% |
| I always prefer having files on my computer. | 20.97% |
| I prefer to own the commercially available product when I really like something but for other things, a file on my computer is fine. | 55.38% |
| No preference (coded retrospectively through open response). | 1.61% |

There were numerous weaker trends present in the data but too many to discuss in detail. Some of the more notable ones are: 47.31% agreement that respondents' comfort in file sharing was partly informed by a lack of proven harm from their perspective (Q4.17); 49.46% reported the immateriality of file sharing as being a factor that informed their comfort with file sharing (Q4.18); from the perspective of 49.46% of the sample, file sharing did have a positive sampling effect (Q4.12); 45.7% reflected anti-corporate attitudes (Q4.13); and a final interesting response was that 52.15% agreed with the statement in question 4.22, "Information should be free. That is all that file sharing is, setting information free."

Questions 4.13, 4.14, 4.16 and 4.22 together could be interpreted as indicators of political or social values but, due to their relatively ambiguous ratings, a broad political consciousness on the part of DC users does not look like something that can be attributed to them from this data. Thus propositions of the progressive copyright position seem less likely in this light.

Overall, despite its poor response rate, the DC network survey was a fruitful exercise in trying to quantify and measure the range, strength and distribution of the views respondents held in relation to P2P file sharing.



## 4.4 Summary discussion and analysis

The emergent patterns and significant insights from the empirical research are varyingly supportive of the framework I have laid out for interpreting P2P file sharing. The free exchange of cultural artefacts as a part of normal cultural experience was exhibited by the target population quite strongly across the empirical data. Similarly, it appears that in practice (as discussed in the literature review), file sharing does not appear as an actively deliberated decision - it is an automatic, routine behaviour. The hypothetical initial *decision* is a vague thought for the average DC network user. As a result, it is strange to ask members of this peer group whether they use file-sharing networks because the question becomes analogous to "do you participate in contemporary cultural life?" "No", would certainly be a strange answer and an indicator of something other than the broad patterns I examine in this thesis.

The strong identification with various proxies for rationality (convenience, scope for consumption maximisation, expanded consumption options) fits into the type of bounded rationality I have discussed above. While the P2P network participation of the respondents was significantly influenced by their

subjectivities (for example, affection and preference for material goods and the importance of subjective value), the broad pattern of utility maximisation giving rise to the informal social structure of file sharing is evident.

With regard to free distribution of copyright material being an irrevocable development, I cannot show this to be directly supported by my empirical research, as UCT's DC network participants hardly seem to be truly recalcitrant fee dodgers. Their P2P file sharing is casual and opportunistic but has not proved to indicate social values or beliefs in relation to cultural artefacts, their consumption or market relations that would clearly identify them as a group outside the status quo. They are sensitive to the illegal status of their behaviour (Q4.06); although distinguishing P2P file sharing from stealing was common, the vast majority condemned depriving others of their physical property (Q4.07) and these statements in combination with the ambiguous spread of responses to the more absolute question statements do not indicate any especially defining sub-cultural views.

At the same time, doubt whether the type of social engineering Steven Hetcher (2004) advocates (engineering of moral copyright law obedience) is possible - social constructivist governments of the 20th century illustrate the difficulties of such attempts well[58]. In the case of P2P file sharing as well as many, if not most, behaviours, people find themselves governed by their internalised conception of common practice rather than law, as in the case of respondent B. We obey laws when they happen to align with conduct norms, when we fear their consequences and when we appreciate their rhetorical basis. Other than that, unquestioning obedience of the law does not appear to be a significant feature of contemporary secular Western society. This doesn't mean P2P file sharing would never change but the underlying system tendency of the internet toward free flow of information and the apparent great desire of modern people for perpetual cultural stimulation appear to be constants that together give P2P file sharing the appearance of being irrevocable. The way in which these two tendencies manifest themselves need not be unchanging. Intensifying system tension is certainly not sustainable, thus we are necessarily approaching some sort of turning point.

It should also be clear by now that the normative copyright position has a very low level of resonance within UCT's DC network population, which can presumably be accepted as true in other file-sharing network populations as well. That being said, it appears that most of the respondents had not encountered much rhetorical opposition to their P2P file sharing (particularly any that was convincing). All of the focus group respondents had seen the "you wouldn't steal a car video" before and arguably all of the respondents would have encountered UCT's recent copyright awareness campaign[59] whose message boils down to an instruction: *respect copyright law*. Unequivocal instructions forbidding an existing practice of such great utility clearly do not command obedience in the case of P2P network participation. Presumably those championing copyright law tend always to give instructions because to appear to debate copyright law with those who routinely break it would itself weaken the position of copyrights. For the sake of maintaining the legitimacy of copyright laws public debate is unlikely but, ironically, it seems that P2P network participants would need a good deal of convincing to reform their behaviour in the face of the advantage of P2P sharing.

58 e.g. Economic planning in the Soviet East and technical rationalisation of many aspects of American life (Jordan 1994).

59 The position of an institution like a university in relation to copyright law and file sharing is simple: universities must be seen to discourage the violation of copyrights by its student population. While there are some legal precedents that may protect service providers (in this case a university) from what users (students) do with the services provided, the potential legal damages for a university where it is found guilty of turning a blind eye to its property (computer network infrastructure) being used to infringe copyrights leads it to attempt to appear tough on copyright issues.

Lastly, there is evidence for and against the contention that P2P file sharing is a moral issue. The more involved the respondents had been in file sharing, the clearer their positions were on their own file sharing in general, including the scope for its acceptability. Those more casually involved were less considered in their views, with vaguer conceptions of how file sharing might be justified. This is evocative of the tendencies of *habitus*, which directs practice and in turn, reconstructs itself to accommodate and justify practice (Bourdieu 1990). More colloquially, we construct rationalisations to accommodate our actions.

P2P file sharing does not have a default moral value - if it did would-be file sharers would be aware they were breaking a social regulation prior to action. In practice, the average respondent to my survey made use of file-sharing networks prior to encountering the possibility that there might be anything wrong with it (for some survey respondents completing the survey was this event). Perhaps denying the moral dimension of the act of non-commercial redistribution of cultural artefacts is too strong; it certainly has proven historically possible to communicate in moral terms regarding anything[60]. Rather, P2P networks are a morally undefined space and the struggle to define it must contend with existing normatively informed practice.



60 For example, although we arguably consider most avenues of scientific research to be morally neutral today, this was not always the case. In pre-enlightenment Europe, any challenge to the geocentric view of the universe for example was markedly contentious on religious and moral grounds (practically synonymous at the time).

# 5. Conclusions

## 5.1 Primary research

My primary research strongly supports an interpretation of P2P file sharing as being enabled through a positive sharing norm and driven by the utility-maximising drive of people navigating the propositions of the market. Respondent A reflected on how he and his peer group revelled in the freedom from expenditure afforded by the arrival of Napster. Contrastingly, respondent C's file sharing was more circumstantially bound - as long as he felt he could not afford the commercial version of the cultural artefacts he downloaded, he cohered with his principles. While respondent C tried to establish a space where it's acceptable to infringe copyright, respondent B and D emphasised the relativity of doing so: firstly, it is not a criminal act in South African law and secondly the relative impact of UCT's DC network is small, it being a tiny fraction of the file sharing that happens in the world.

Although much less considered in their actions, the focus group participants readily expressed a sense that what they were doing was not really having any sort of negative impact, although through our discussion they became sensitive to the thought that it might. Discussing their CCV was clearly a novel experience as it had clearly become a *normal* part of their everyday lives and experience. Alongside expressing some discomfort at the notion of harm, some of them revealed persistent affection for material commercial products despite the fact that digital alternatives were often easily had for free.

The general trend of responses to the survey in aid of interpreting P2P file sharing was that most of the DC network sample didn't feel they were doing anything morally wrong. Further, the conceptual indicators[61] for P2P file sharing being a normatively encouraged behaviour as well as being driven by the desire for utility maximisation were rated highly (some of the clearest trends in the opinion questions). At the same time, it was common that there was no decisive trend for some questions, particularly those relating to factual issues, like question 4.12 which asked respondents if they felt file sharing had a positive effect on music sales[62]. Further reflecting the normative influence of student life towards file sharing were frequent comments in the responses to the final open-ended response question (5.01) to the effect that respondents had not greatly considered their participation in file sharing; it had been observed to be the norm and therefore was acceptable.

The one-on-one interview respondents were clearly more considered in their actions than the survey respondents and had formed decisive stances on file sharing. A portion of the survey respondents appeared to have done the same but across the focus group and survey there was evidence of discomfort with file sharing. Despite file sharing clearly being a conduct norm for groups like university students, their discomfort and lack of certainty relates to the absence of a common societal narrative for P2P file sharing. This lack of a clear understanding of how file sharing fits into society is partly to do with its novelty; society generally has not had much time to react to it yet, compared to other changes. Of course, the legal system has answers to that question, as do intellectual property industry representatives, but law and order are at odds with practice in

61 Question 4.01 asked respondents to rate *convenience*, *sampling*, *consumption maximisation*, *beating local release times* and *expanding access to goods not available locally* as explanations for their file sharing. Question 4.21 asked whether respondents felt file sharing was the norm for their peer group.

62 This trend is quite reasonable as many of the questions asked were a matter of fact rather than opinion, even though those facts are very difficult to establish, as I demonstrate in my introduction. Lack of confidence with those questions relating to factual information is not necessarily a sign of the respondent's general confidence in relation to factual matters.

this case and the sectional interests of the intellectual property industry obviously do not strike a chord with file sharers generally. Thus the absence of a satisfactory narrative that puts file sharing broadly in perspective. As I have argued, one must look beyond simplistic moralising interpretations to understand CCV and file sharing.

Despite file sharing appearing as though it is a complete market alternative, my study suggests that in practice it is not. It has been 10 years since the start of popular P2P file sharing and although it caught on tremendously quickly, people (including DC network participants) continue to buy commercially available cultural artefacts. Rather than replacing market consumption entirely, file sharing appears to be a supplement and addendum to what the market has to offer many file sharers[63].

Earlier I identified the idea of *secondary market compensation* - the tendency of consumers of cultural artefacts living in secondary (or tertiary markets) to use file sharing as a way to compensate for late release, poor variety and high prices of cultural artefacts. Perhaps it is a feature of globalised culture but all respondents in this study appeared to have primary market consumption standards: if a television programme airs in the US, they saw no reason to wait for a local TV network to license and air it; if a cultural product costs more in South Africa than it does in another country, people with these consumption standards will tend towards a better price or service (in this case, free). While this appears as *secondary* market compensation from a South African perspective, file sharing often constitutes market compensation even in primary markets where the market fails to compete with the standard of access and service people can get through file sharing. What the market is unwilling to provide, internet users can easily take.

At the end of this section on my primary research, it should be easy to see that copyright law was irrelevant to the everyday experience of the respondents in this study; even for those who thought their file sharing might have had undesirable effects this sensitivity did not seem informed by the illegality of file sharing. For them the real concern was rather the possibility that they might have been doing something inconsiderate or unfair. Overall, there wasn't a clearly definitive answer to be had in explaining the broader significance of file sharing from the subjective experience of casual copyright violators. It is fairly easy to see how any group of people can struggle to make sense of the unintended consequences of their collective actions.

As I mentioned earlier, I conceive of file sharing structurally. This is partly because, like so many collective activities, file sharing has a structural character. It is, however, dissimilar in several respects to other more long-lived, persistent social structures which have legal presences, political status and often a direct relationship with the economy. But despite their decentralised architecture and semi-formalised social organisation, P2P networks are discrete structures that nevertheless have persistent regularities and patterns that organise them internally, like any other structure or system.

## 5.2 Systems theory redux

Once again I ask the question, *what if file sharing is not a choice?* Although DC network participants were able to reflect on their file sharing as if it were a choice, they scarcely were able to clearly articulate file sharing itself as a conscious, purposeful act. This, in Luhmann's terms, is because they are simply perpetuating mass media communication, like psychic systems do in all social systems as conduits of communication.

63 Conversely, for many file sharers, their file sharing does completely supplant any market-based consumption of cultural artefacts that they might otherwise take part in.

File-sharing networks are social systems, semi-independent subsystem outgrowths of the overall mass media system. For clarification, file sharing *is* mass media communication. Just like printing, broadcasting or commercial replication, it is the redistribution of a mass media communication in a fixed form. Unlike other communication, there is no interaction between the creators of the media messages and their end receivers (although there can be communication between file-sharing network users who redistribute those messages). File sharing emerged out of the conditions of society's environment; technological advance is the environmental development that spawned the mass media system and the successful adaptation of other social systems to that environmental change has partly influenced their place in the balance between modern social systems.

File-sharing networks are especially remark-worthy from a systems theory perspective in two ways. The first is that their autopoiesis is highly independent and dissociated from the autopoiesis of other systems; they are almost independently reconstituted by the internal communication of the mass media social system. File-sharing networks reconstitute and perpetuate themselves each time a file is downloaded and shared again. The autopoiesis of file-sharing networks mirrors my discussion of file-sharing network viability in the literature review above.

Of course, all social systems can only reconstitute themselves through their own communication. What I am pointing out by emphasising the independence of file-sharing network autopoiesis is that it is an evolutionary step in mass media communication which appears to have decoupled itself from the economy as well as other social systems (law in particular). This is the *discrete nature* of file-sharing networks as systems, an evolutionary response to the environment's growth in complexity which, in turn, irritates the systems around it (most notably those coupled to the mass media). It also must be kept in mind that file-sharing networks depend on the continued autopoiesis of the overall mass media system, which autopoiesis has become strongly coupled with the economic system. As the theory of social systems goes, the evolution and coupling of autopoietic processes leads to greater complexity and robustness of systems (Luhmann 1995), hence the scale of modern media communication products[64].

Also, as stated, file-sharing networks are partly driven by new content (which is characteristic of the mass media system as a whole), so in this way there is still a tenuous link between the economic system and file-sharing networks, but my point still stands - even if the complexity and number of mass media products decreased, file-sharing networks would be capable of autopoiesis. The mass media programme of entertainment, although partly driven by novelty, is so plentifully furnished by historical accumulation of mass media products that P2P networks would be able to sustain themselves on much that had not been yet shared in lieu of the brand new. There are already more mass media products in circulation than any single psychic system could experience, thus the autopoiesis of file-sharing networks could continue well past any future breakdown of economic and mass media coupling (a hyperbolic and improbable outcome).

The second way file-sharing networks are especially significant as social systems is that P2P file sharing is not one unitary system, it is great number of distinct, independent but practically identical systems. Continuing from Luhmann's biological analogies, they are like cells: cells in mammals depend on a supply of oxygen

64 For example, products like Hollywood movies and computer games are increasingly complex and costly, a tendency driven by the rise of overall systemic complexity. Advancing production standards enabled by new technology keep complexity and cost of production relatively high, ensuring that demand for a competitive standard of mass media product is met. The ever-extending standard of computer generated imagery (CGI) in both media products in this example continue to increase and this increase in complexity is made significantly possible through the coupling of the mass media and economic systems.

and a number of organic molecules for cellular respiration (continued existence and reproduction) and the overall system (the body) supplies a steady source of both. However, if one cell expires the others continue as before. Similarly, there is a lack of substantive consequences for file-sharing networks from the irritation they direct at the legal and economic systems. The legal system expresses its power in relation to legal units; individual file sharers or the legal owners of singular P2P network systems, neither of which expressions is effective at deterring file sharing generally due to its discrete, segmented character and prevalence. Neither the economic system nor the legal system is unitary but the breaking of the coupling between economic and mass media communication has been able to irritate an entire subsystem of the economy (the intellectual property industry), making it a de facto unit for the practical purposes of this discussion.

So what does systems theory tell us in relation to file sharing? File-sharing networks are an evolution of mass media communication, an evolution to the point where the functional coupling with the economic system is unnecessary for reproduction of the mass media. This break translates as *non-payment* in the reality of the economy, putting the economic system, and legal system in turn, into a constant state of irritation. However, the default state of relationships between systems is one that tends towards equilibrium (Allan 2006). Upsets do occur (like the one discussed in this thesis) but it is an overall system tendency that stability be reached; systems that do not manage to adapt to their environment reach crisis point, receding in significance within the overall system.

The mass media reaching a point of independent autopoiesis is a product of it adapting to and taking advantage of the infrastructural possibilities of the environment (the internet), something which the economic system has been slower at doing. This is a fairly broad and theoretically bound interpretation and, although fruitful in giving insight into what file sharing *is,* it does not provide specific insight as to how the intellectual property industry might evolve. In the hope of generating a practical as well as theoretically rich conclusion to this thesis, I will make some observations about the practical position and future of the intellectual property industry.

## 5.3 Message to the market

Many critics of copyright law (e.g. Lessig 2004) suggest we are necessarily moving towards a legal paradigm shift that leaves copyright law in the past, embracing a more progressive legal treatment of intellectual creativity that is more complementary to our times. Respondent D elaborated interestingly on the problem with copyrights:

*"You have to look at the history of where copyrights came out [of] and that's essentially where the flaws come in. That copyrights were made in a time X and now we're in time Y. There needs to be a change but there's people ... [from] ... the generation of copyrights, [and] they're like, 'we want to perpetuate what we were brought up dealing with and that's what we're gonna keep on going with.'"*

Copyrights have historically been an effective way of protecting a business built on monopoly production of distinct products. Mass production of physical artefacts was a pre-requisite of mass consumption. The means for replicating such goods materially have always been costly and the process has been time consuming, immediately removing ordinary people from that class of people who could potentially break copyright law on a genuinely threatening level. This setting also made it comparatively simple to deal with those who did have the means to break copyright and threaten the profitability of this *unit-sale* business model. This setting made the intellectual property industry highly profitable, powerful and expansive.

However, in the setting where every member of society who can get access to a computer with a reasonable internet connection has the potential to bypass copyright law, it becomes practically impossible to enforce. The original conception of copyright law was not a restriction practically conceived to have an effect on individual consumers but rather others in businesses. Copyright law has not remain unchanged since respondent D's *time X* but, in the contemporary context, its expansion and elaborations only appear to widen the scope in which copyrights are ineffective. The solution for the legal system to the irritation this creates is quite simple: *shift the goal posts* - change the definition of what is acceptable to adapt to the changes in the system reality.

Such a legal change would of course be untenable for the intellectual property industry as it would reveal it to be the overgrown middleman of cultural production I argue it to be, made conscious of its irrelevance in the age of digital production, marketing and distribution. This is precisely why it appears to wholeheartedly fight what looks like an impossible battle. The system that has sustained it has been under a fundamental and growing threat since the start of popular file sharing. Having failed to solve its problem through primary strategies involving legal and moral communication, it is ironic that more effective solutions to the challenge presented by file sharing come from economics itself.

This is partly why I have used a version of rational choice theory in this thesis, since to all intents and purposes the principle of utility maximisation (or some adjustment thereof) has historically been the behavioural language of economics. If one looks at file-sharing networks as an alternative service as opposed to a breakdown of economic exchange, an option other than a fight to stop file sharing emerges.

To put this in clearer perspective, I again highlight what appear to be the principle reasons why people use file-sharing networks: convenience, scope for consumption maximisation and broader and more immediate access to cultural artefacts. For some file sharers it is important that file sharing is free too, but my survey suggests a good number of file sharers do spend some money on cultural artefacts and thus it is rather absolute expenditure (including opportunity costs) that is a deterrent for them, as opposed to expenditure itself.

How can the intellectual property industry compete with a service that is already convenient as well as free? By offering a better service. As a service, UCT's DC network has flaws that are typical of many P2P networks: it has a limited range of cultural artefacts available[65] which are frequently of poor quality[66]. Also, although being a consumer from behind a computer has generally simplified life for many, knowing what to consume in the midst of a number of choices that have become psychologically difficult to process (Castells 2010) means that finding what to watch or what to listen to become a labour. There are many other small experiential flaws (too many to discuss) that could be challenged by a competitive, capital-developed sales platform that may be able to compete against P2P file-sharing systems.

A business model currently being implemented appears to take a lead from the idea that one can offer a service that is more convenient than file sharing and offers sufficient range and immediacy of access to cultural

65 UCT's DC network is predominantly a hub for the redistribution of Hollywood movies, mainstream American TV programming, hip-hop and dance music. The prevalence of this range of cultural artefacts reflects their popularity, likely satisfying the tastes of many users but it is not a presumption to say that this might be insufficient variety for others.

66 For example, movies have been pirated for some time by people using video cameras to tape copies of whole cinema screenings of movies. These *cams* are a frequent occurrence on file-sharing networks. Respondents in my focus group complained especially about this, emphasising their willingness to pay for quality copies, especially of movies.

products for free or at a value-added level for a moderate subscription fee. This model of business looks at cultural production moving from the conception of cultural artefacts as *products* to a *service* (Leonhard 2008). Due to the reality of file sharing it is clearly impossible to deny people access to what is popular and widely sought out, but it is still possible in such an environment to sell *quality of access* rather than access itself.

The most media-centred example of this business model is a Swedish company called Spotify[67]. Launched in 2008, Spotify offers free ad-supported access and an affordable value-added subscription to its library which gives streaming[68] access to material from the big four[69] music labels as well as a host of independent labels. The service still has limited reach (it is currently available in only 7 European countries) and is certainly not an option for countries like South Africa, where internet bandwidth does not reach everyone and is of insufficient capacity to support widespread streaming services - relatively speaking, poor countries which have the worst internet access and where it has historically been difficult for the intellectual property industry to maintain industry-approved local markets for their goods in any case.

Cultural goods as a *service* as opposed to a *product* appear to have a viable future, especially since the modern appetite for consumption of cultural artefacts seems so extensive. If cultural goods as a service persist, they will probably be initially less profitable than the currently suffering historical system of distribution (which as I have been arguing is not yet obsolete). Competing with file-sharing networks provides a persuasive option in the rational pursuit of consumers to find *the* best, easiest, most convenient and or cheapest way to get access to cultural goods. Unauthorised replications of goods has been part of society for longer than copyright law and with the modern scope for digital replication, it scarcely seems probable that the replication of cultural artefacts could ever be controlled. I suggest that a *service* business model is a likely answer to the problem facing the intellectual property industry and, although it is not a viable option for all consumers of cultural products, it might be at some point.

Until an alternative business model is fully adopted by the intellectual property industry, it will find itself in a sustained state of irritation and its ability to reproduce itself through its current business model might become exhausted. It is, however, more probable that the industry might take a pragmatic turn, eventually giving up the business model that has made it what it is today.

Perhaps this will represent a paradigm shift of sorts but, interestingly, a shift towards a service-based model makes ownership irrelevant; copyright law could remain but practically it would no longer be the basis of industries that produce cultural products. For now, the intellectual property industry persists in its difficulties relating to free digital distribution. It will undoubtedly continue pursuing strategies of surveillance, encryption, legal prosecution and moralising. Precisely what will happen in the future remains to be seen but for now file sharing and CCV generally are the most convenient means to access cultural goods for those who are integrated into contemporary communication technology.

## 5.4 Creative labour in a post-scarcity economy

While it is certainly possible for P2P networks to perpetuate themselves despite a possible decline of the

67 Information on *Spotify* comes from http://www.spotify.com.

68 Streaming is the equivalent of broadcasting using internet bandwidth. Data containing sound or images is downloaded to the end users' computer but not stored. Spotify's subscription service does, however, allow for limited local storage.

69 Sony Music Entertainment, Universal Music Group, Warner Music Group and EMI.

intellectual property industry, such networks are arguably popular because they are reflections of culture as a system, driven by the new and reimagining of the old (making it new). However, culture itself could never be eliminated, it is part of human life - in *Gemeinschaft* we all made our own culture, in *Gesellschaft* we consume culture produced by specialised culture-producing workers. As discussed, the reciprocity of the arrangement of the modern division of labour for cultural creators is no longer guaranteed due to the infrastructural potential of modern technology. So what does this mean for creative labour in an economy of post-scarcity?

If this unfettered dispersion of culture is not something we can step back from[70], then it is part of the system reality that cultural production must adapt to, however challenging. It seems to have been a historical truth that human beings are mostly incapable of exercising restraint in the face of finite resources and potential for utility maximisation. In the classic societal problem of "the tragedy of the commons" (Hardin 1968), cattlemen of feudal Europe were unable to exercise restraint in enlarging the size their herds even though the ecosystem of the common grazing lands became less renewable with each head of cattle. Each cattleman's utility increased with each beast, despite there being less food for each herd animal (making for skinnier, less valuable animals) and the eventuality of the commons being ruined. The tragedy of the commons is a challenge modern society increasingly faces[71] but it is not an accurate reflection of culture. Culture is a common resource that we are all immersed in but it is not something that can be exhausted like grazing lands. Those who have found them themselves driven to produce culture have always found a way to be able to do so, despite the economic pressures of their society.

Nevertheless, there are practical solutions to this problem for contemporary cultural production. Unfortunately I do not have space to discuss solutions comprehensively as different classes of cultural artefact necessitate different solutions due to their particularities, often relating to how they are consumed. The material experience of reading a book is arguably still a persistent preference amongst most people who regard holding books as part of the experience rather as than part of the infrastructure that must be navigated in pursuit of that experience. David Boyle notes that the publisher of his book "Why Intellectual Property in the Public Domain: Enclosing the Commons of the Mind" (2008), along with other publishers, has discovered that actively distributing free digital versions of books can positively influence sale of printed editions[72]. At some point the growth of the ebook reader market may threaten book publishers but there appears to be no evidence of this yet.

TV production is arguably the most adaptable to the system reality of P2P networks because for the most part, TV production is paid for through advertising. In this way TV closely mirrors the business models



70 It is well known that the Chinese government has expended a great deal of energy on censoring the content of the internet and monitoring the activities of its citizens online, so it is hypothetically possible to engineer some sort of Orwellian regime of internet monitoring in the interest of the intellectual property industry but this is unlikely in the West. Public expenditure on such a project would be immense and difficult to justify and the political environment of Europe has such a developed sense of human and citizen rights (including the right to privacy and the right to an internet connection in some countries - discussed above) that is highly sensitive and reactive to restriction. If copyright infringement was classified as a criminal act, this might be different.

71 Environmentalism is a prime example of the reaction to industrialised overconsumption of resources we know today to be finite. The irony is that public awareness of unsustainable consumption is greatest in parts of the world that constitute the largest markets for the products of industrial production. In the West, we know what we are doing but seem unable to show restraint as individuals or a society; in Luhmanns terms, production is beholden only to the logic of economics. Thus attempts to control the economic system through political communication is an arduous struggle.

72 This may, however, be a characteristic of the academic book market rather than the broader print market. If a published work becomes significant in a field, academic institutions become more likely to buy hard copies.

of both newspapers and radio, where, for the most part, the more consumers there are the better for that industry. In the case of TV programming distributed on P2P networks, the advertising is edited out and TV networks, which are the historical funders of TV production, gain no direct revenue from people watching edited versions of their programming. There is an undeniable correlation between what is popularly watched on broadcast TV and the TV programmes that are popularly distributed on P2P networks. There even appears to be positive reinforcement of broadcast TV ratings as a result of P2P network distribution of the same programming.

Mark Pesce (2005) presents an alternative business model for TV production using bit torrent P2P technology (discussed above) that sidesteps TV networks completely. He points out that the production costs of one TV episode are equivalent to what an advertiser pays for one prime-time TV network advertisement slot. His solution is that TV producers build direct relationships with advertisers, avoiding TV networks altogether, using bit torrents to distribute their programming. TV programming in this model would contain moderate product placement (already a feature of contemporary film and TV) and instead of network logo branding, each episode would contain an equivalent embedded brand logo. In this model there are no full-screen adverts to easily filter out, they are part of the programming. A possible downside to this model is that corporations are increasingly conscious and cautious of their public image and might be reluctant to fund some less-conventional ideas that TV networks occasionally take risks on. The point of the example is that there is a future for TV production that could possibly maintain the production and entertainment standards experienced today while treating P2P distribution as an advantage rather than an obstacle.

Trent Reznor, singer for popular alternative rock band, Nine Inch Nails (NIN in abbreviation) publically discussed the difficulties and challenges of adapting to the contemporary music market in a Digg.com interview (2009). Reznor's approach to NIN's business model involves accepting that you cannot control access to music but what you can count on is the willingness of enthusiasts to purchase value-added products[73] and for a good number of people who appreciate music generally (whether purchased or not) to attend live performances[74]. In this business model the music itself becomes promotional media that attracts consumers to merchandise and live performances. Reznor entered the formal music industry in the late 1980s, finally becoming an independent, unaffiliated musician in 2007. While NIN's existing market presence was built up from within the formal music industry and this was no doubt significant in their ability to become independent and have the finances to replicate and distribute their work themselves, their story still shows the possibility for continued a livelihood as professional producers of music, despite their product being freely available.

The last example I use is one that relates to computer game production. The same business model used by Spotify was implemented in 2010 in the computer game market in a subscription streaming service called Onlive[75]. The infrastructure of Onlive employs *cloud computing,* a system that uses powerful servers to generate and process the graphical and audio output of a game which is then streamed to the end user.

73 Reznor outlines a three-tiered approach to distributing music. NIN's music is available for free from their website at a high level of sound-compression (low quality), at a better level of audio quality for a few dollars and "deluxe box sets" on full audio quality CDs for a more substantial amount of money.

74 The majority of professional musicians make most of their income through performances and licensing their work for commercial purposes. The nature of record deals means that recordings are only especially profitable on large scales and there are no guarantees of how records will sell.

75 Information from www.onlive.com.

The service has the advantage of eliminating most hardware costs (with the exception of the requirement of a fast internet connection) like up-to-date computer components and console gaming hardware. The user constantly experiences games at their highest level of visual display quality, eliminating the requirement of buying new hardware every few years. These services will gain prominence in time since they can compete with P2P file sharing, which involves lengthy download processes due to the size of modern games, effort expended in subverting game encryption, as well as the absence of a host of value-added features producers are increasingly able to withhold from those who crack as opposed to buy their products. Services like Onlive are cheap ($5 per month in 2010) in relation to what they offer and desirable because they make the experience of playing computer games more instantaneous.

Cultural production can have a future that is as vibrant and varied as that which is currently on offer, despite the infrastructural challenges posed by P2P network sharing. The intellectual property industry needs to adapt to the system reality, which means taking advantage of the capacity that contemporary infrastructure offers while not wasting resources on fighting systemic tendencies that cannot be arrested. This can be achieved through treating P2P file-sharing network participants as though their choice is rational, using the same grounds to compete for their patronage by offering an alternative with a rational advantage.

The findings of my research show that people are not unwilling to pay money for experiences provided to them through cultural artefacts; it is rather that people will become increasingly less willing to pay inflated prices when they know there is a free alternative. This probably means that there is certainly less money to be made off each individual consumer of cultural artefacts over the short term in a *cultural-production-as-service* as opposed to *cultural-production-as-product* business model. Business built on subscription services does have more or less predictable income flows that are dependable as long as the service is competitive, hence a future for cultural production despite the infrastructural fluidity of P2P networks.

# Bibliography

Allan, K., 2006. Social systems and their environments: Niklas Luhmann. In *Contemporary social and sociological theory*. Thousand Oaks: Pine Forge Press, pp. 213-237.

Allingham, M., 2002. *Choice theory: A very short introduction*, New York: Oxford University Press.

Becker, J. & Clement, M., 2006. Dynamics of illegal participation in peer-to-peer networks—why do people illegally share media files? *Journal of Media Economics*, 19(1), 7-32. Available at: http://www.warsystems.hu/wp-content/uploads_bodo/becker-Dynamics%20of%20Illegal%20Participation%20in%20file-sharing%20networks.pdf [Accessed February 24, 2010].

Boliek, B., 2005. Grokster to stop distributing file-sharing service. *The Washington Post*. Available at: http://www.washingtonpost.com/wp-dyn/content/article/2005/11/08/AR2005110800145.html [Accessed January 2, 2010].

Bourdieu, P., 1990. *The logic of practice*, Cambridge: Polity.

Boyle, J., 2008. *Why intellectual property? in the public domain: enclosing the commons of the mind*, New Haven & London: Yale University Press.

Brinberg, D. & McGrath, J., 1985. *Validity and the Research Process*, London: Sage Publications.

Butler, S., 2007. Report: Piracy has cost U.S. $12.5 billion. *Billboard*. Available at: http://www.billboard.biz/bbbiz/content_display/industry/e3ieb3b32f41100f50831d495714218485b [Accessed December 20, 2009].

Castells, M., 2010. The culture of virtual reality. In *The rise of the network society vol 1. 2nd Edition*. Chichester: Wiley-Blackwell Ltd.

Chiou, J., Huang, C. & Lee, H., 2005. The Antecedents of Music Piracy Attitudes and Intentions. *Journal of Business Ethics*, 57(2), 161-174. Available at: http://www.jstor.org/stable/25123463 [Accessed February 24, 2010].

Condry, I., 2004. Cultures of music piracy: An ethnographic comparison of the US and Japan. *International Journal of Cultural Studies*, 7(3), 343-363. Available at: http://ics.sagepub.com/cgi/content/abstract/7/3/343 [Accessed July 12, 2009].

David, M., 2010. *Peer to peer and the music industry: The criminalisation of sharing*, London: Sage.

Davies, G., 2002. *Copyright and the public interest*, London: Sweet & Maxwell.

De Vaus, D., 2002. *Surveys in social science research*, London: Routledge.

Elias, S. & Stim, R., 2004. *Patent, copyright & trademark: an intellectual property desk reference 7th edition*, Nolo.

Giddens, A., 1990. The consequences of modernity. In C. Calhoun, ed. *Contemporary social theory*. Oxford: Blackwell, pp. 243-253.

Gigerenzer, G. & Selten, G., 2001. Rethinking rationality. In *Bounded rationality: The adaptive toolkit*. London: The MIT Press, pp. 1-11.

Graham, F., 2009. How The Pirate Bay sailed into infamy. Available at: http://news.bbc.co.uk/2/hi/7893223.stm [Accessed June 30, 2010].

Gu, B. & Mahajan, V., 2005. How much anti-piracy effort is too much? – A study of the global software industry. *McCombs Research Papers*. Available at: http://ssrn.com/abstract=825165 [Accessed October 25, 2009].

Hardin, G., 1968. The Tragedy of the Commons. *Science*, 162(3859 (Dec. 13, 1968)), 1243-1248.

Hargreaves-Heap, S.P. & Varoufakis, Y., 2004. *Game theory: A critical introduction*, London: Routledge.

Heidensohn, F., 1989. *Crime and society*, Hong Kong: MacMillan Education Ltd.

Hennink, M., 2007. *International focus group research: A handbook for the health and social sciences*, New York: Cambridge University Press.

Hetcher, S., 2004. The music industry's failed attempts to influence file sharing norms. *Vanderbilt Journal of Entertainment Law and Practice*, 10(2004-2005), 10-40.

Joas, H. & Knöbl, W., 2009. The classic attempt at synthesis. In *Social theory: twenty introductory lectures*. Cambridge: Cambridge University Press.

Jordan, J.M., 1994. *Machine-age ideology: social engineering & American liberalism, 1911-1939*, North Carolina: University of North Carolina Press.

Karagiannis, T. et al., 2003. File-sharing in the Internet: A characterization of P2P traffic in the back bone. Available at: www.cs.ucr.edu/~tkarag/papers/tech.pdf [Accessed July 9, 2009].

Kimmel, A.J., 1990. *Ethics and values in applied social research*, London: Sage.

Laqueur, T., 1976. The cultural origins of popular literacy in England 1500-1850. *Oxford Review of Education*, 2(3), 255-275.

Lee, E., 2005. The ethics of innovation: P2p software developers and designing substantial noninfringing uses under the Sony Doctrine. *Journal of Business Ethics*, 62, 147-162.

Leonhard, G., 2008. *Music 2.0*, Mediafuturist (self-published). Available at: http://kotisivukone.fi/files/music20.kotisivukone.com/tiedostot/music20book_hires.pdf.

Lessig, L., 2004. *Free culture*, New York: Penguin Press.

Liang, L., 2004. Copyright, cultural production and open content licensing. *Alternative Law Forum*. Available at: http://www.altlawforum.org/PUBLICATIONS/document.2004-12-18.0245048957 [Accessed May 6, 2005].

Liebowitz, S.J., 2006. File sharing: creative destruction or just plain destruction? *University of Chicago Journal of Law and Economics*, XLIX(April 2006). Available at: http://www.loc.gov/crb/proceedings/2006-3/riaa-ex-c-110-dp.pdf [Accessed July 19, 2009].

Liebowitz, S.J., 2005. Pitfalls in measuring the impact of file-sharing on the sound recording market. *CESifo Economic Studies*, 51(2-3), 435-473.

Liptak, A., 2003. Ideas & trends; The music industry reveals its carrots and sticks. *New York Times*. Available at: http://www.nytimes.com/2003/09/14/weekinreview/ideas-trends-the-music-industry-reveals-its-carrots-and-sticks.html?pagewanted=1 [Accessed January 2, 2010].

Loughlan, P.L., 2008. 'You wouldn't steal a car': Intellectual property and the language of theft. *European Intellectual Property Review*, 29(10), 401-410.

Luhmann, N., 2000. *Reality of the mass media*, California: Stanford University Press.

Luhmann, N., 1995. *Social systems*, California: Stanford University Press.

Lunceford, B. & Lunceford, S., 2008. Meh. The irrelevance of copyright in the public mind. *Northwestern Journal of Technology and Intellectual Property*, 7(1), 33-49.

Marling, W.H., 2006. *How American is globalization?*, John Hopkins Unniversity Press: Baltimore.

Moeller, H., 2006. 'What is social systems theory?'. In *Luhman explained: From souls to systems*. Chicago: Open Court, pp. 3-63.

Moessigner, P., 2000. Rational Choice and Rationality. In *The paradox of social order: Linking psychology and society*. New York: Walter de Gruyter, Inc.

Oberholzer-Gee, F. & Strumpf, F., 2005. The effect of file sharing on record sales an empirical analysis. *Journal of Political Economy*. Available at: http://www.unc.edu/~cigar/papers/FileSharing_June2005_final.pdf [Accessed July 9, 2009].

Oppenheim, C. & Robinson, M. 2003. Loughborough university students' attitudes to P2P music file

sharing. *Journal of Information Law and Technology*, 8(2). Available at: http://magpie.lboro.ac.uk:8080/dspace-jspui/handle/2134/289 [Accessed February 24, 2010].

Osgerby, B., 2004. *Youth Media*, New York: Routledge.

Ottermann, B., 2009. Pigeon beats Telkom. Available at: http://www.news24.com/SciTech/News/Pigeon-beats-Telkom-20090909 [Accessed July 9, 2010].

Patton, M., 2002. *Qualitative Research & Evaluation Methods*, London: Sage Publications.

Pesce, M., 2005. Piracy is Good? Available at: http://video.google.com/videoplay?docid=-1720068211869162779 [Accessed February 15, 2008].

Phau, I., Teah, M. & Lwin, M., 2010. "Are you a peer to peer pirate?" Attitudes towards downloading movies and TV series through P2P networks. *Australian and New Zealand Academy of Management*. Available at: http://www.duplication.net.au/ANZMAC09/papers/ANZMAC2009-197.pdf [Accessed February 24, 2010].

Ranganathan, K. et al., 2003. 'To share or not to share': an analysis of incentives to contribute in collaborative file sharing environments. *Workshop on Economics of Peer-to-Peer Systems*, 1. Available at: http://www2.sims.berkeley.edu/research/conferences/p2pecon/papers/s1-ranganathan.pdf [Accessed March 18, 2010].

Reznor, T., 2009. Digg Dialogg: Trent Reznor. Available at: http://digg.com/dialogg/Trent_Reznor [Accessed March 24, 2009].

Rimmer, M., 2007. *Digital copyright and the consumer revolution: hands off my iPod*, Northampton: Edward Elgar Publishing.

Rutter, J. & Bryce, J. 2008. The consumption of counterfeit goods: `Here be pirates?' *Sociology*, 42(6), 1146–1164. Available at: http://soc.sagepub.com/cgi/content/abstract/42/6/1146 [Accessed July 22, 2009].

Ryan, T., 2002. Infringement.com: RIAA vs Napster and the war against online music piracy. *Arizona Law Review*, 44(2), 495-520. Available at: http://heinonline.org/HOL/LandingPage?collection=journals&handle=hein.journals/arz44&div=18&id=&page= [Accessed December 18, 2009].

van Selm, M. & Jankowski, N., 2006. Conducting online surveys. *Quality & Quantity*, 40, 435–456. Available at: http://www.springerlink.com.ezproxy.uct.ac.za/index/3H4585R434778415.pdf [Accessed July 13, 2009].

Siegfried, M. 2005. Student attitudes on software piracy and related issues of computer ethics. *Journal Ethics and Information Technology*, 6(4), 215-222. Available at: http://www.springerlink.com/content/g72r151g41665217/ [Accessed February 24, 2010].

Stalder, F., 2006. *Manuel Castells*, Cambridge: Polity.

Stallman, R., 1999. The GNU operation system and free software movement. In *Open sources: Voices from the open source revolution*. Sebastopol: O'Reilly.

Vaidhyanathan, S., 2001. *Copyrights and copywrongs: the rise of intellectual property and how it threatens creativity*, New York & London: New York University Press.

Wagner, P., 2001. Choice and decision-making. In *A history and theory of the social sciences: not all that is solid melts into air*. London: Sage.

Wang, W., 2004. *Steal this file sharing book—What they won't tell you about file sharing*, San Francisco: No Starch Press.

# Appendices

## Appendix A: Depth interview guide

- Background as a file sharer.
- Involvement with DC Network.
  - Benefits.
- Copyrights.
  - Clarification.
  - A system that works for society?
  - Opinion.
- Legality.
  - Status effect on opinion.
- Morality.
  - Is it a moral issue?
  - Discomfort?
  - Establish boundary.
- Stealing.
  - Any social truth to it?
  - Tangible vs. digital.
- Differences between non-commercial sharing and commercial piracy.
- Value.
  - Monetary value.
  - Social value.
- Reasons for file sharing.
  - Saving money.
  - Convenience.
  - Sampling.
  - Supplement.
  - Greater Access.
  - Early release/periphery market compensation.
  - Logical/rational decision?
  - Replacement (the real challenge to copyright industry).
- Justification.
  - Overpriced goods.
  - Greedy capitalists/anti-big business sentiment.
  - Low perceived impact (rich musicians/companies or no visible consequence).
  - Free publicity.
  - Similarity to taping?
- Barriers to file sharing generally.
  - Generational character.
  - Technical knowledge.
  - Moral?

# Appendix B: Focus group interview schedule

**Introduction:**

- Welcome.
- Restatement of purpose.
    - Legal conflict.
    - Moral question.
    - Human behaviour conflicting with law.
    - My interest: How this behaviour is organised and understood by people.
- Respondent involvement.
    - Students on average seem to be the most common breakers of copyright law.
- Guidelines for conduct and participation.
- Introductions for the recording.

**Open questions:**

- What kind of music do you guys like?
- Do you guys know what copyrights are? (Go into a basic explanation of them).
    - Rights of creations (books, songs, movies, etc).
    - An encouragement to create through profit motive.
        - The more you create & distribute, the more money you make.
    - Other people in society benefit from their creativity.
    - Copyrights mean whenever you use something with a copyright, you owe money for the privilege.
    - Copyrights are not just owned by creators, they are often owned by corporations.
- PLAY "YOU WOULDN'T STEAL A CAR" VIDEO.
    - What is your reaction to this video?
    - How do you think it tries to motivate its message?
    - Is downloading movies or music stealing?
        - If not, what is it then?
- Did you know file sharing or copying music or movies was illegal?
- How do you feel about copyright law?
    - Is it reasonable?
    - Is there a point to laws that are hard to enforce?
- How is downloading an album different from going into Musica and walking out without paying for same album in CD form?
    - Tangibility, not depriving anyone else.
    - Is the internet a place where things are free?
- In the online survey most of you said you thought it was worse to buy pirated copies of things vs. sharing them freely with no money changing hands. Why? What is the difference?
- Most people would probably agree that what they understand to be acceptable or unacceptable behaviour comes from their parents. I assume your parents probably told you that stealing is bad. What do you think your parents think about downloading or copying things?
- Why do you share these kinds of things (... knowing its illegal)?
    - What do you get out of it?
        - Save money (RCT).
        - Trying it out (Sampling).
        - Greater access.
- Are you equally happy to share anything (music, movies, TV shows, software)?

    - How about local music?
    - What if you knew the musician?
    - Software made by a big company?
- Devil's advocate: If I argued to you that downloading songs by someone your respect is a form of disrespect, how would you respond?
- Many of you in the survey said you still buy CDs and DVDs while also downloading. When do you buy and when do you download?
- Is music, movies or anything else you download important in your friendships with people?
    - How?
        - Bonding.
        - Something to talk about.
        - Shared tastes.
- So the things you share have value?
    - How about money value?
- Do you tend to supply your friends with new shared media or are there friends or a friend who supply you?
    - Ratio?
    - What does it do for you to supply your friends with these things? / What does it do for you supplier friend to be able to share with you?
    - What do you think sharing does for people generally?

**Closing:**

- In the survey I asked some questions about a hypothetical online music service where you could download (or stream) as much music as you like for a set fee. What kind of features would a deal like that have to have to attract you?
    - What percentage of people do you think would use that kind of thing?
    - Don't you feel that there are a certain number of people who will continue to try to get things for free, no matter how reasonable prices might become?
- Is file sharing and copying things a non-issue in your lives?

Closing statement: It seems like I've touched on all the issues I intended to. Does anyone have anything they'd like to add in relation to our discussion here?

## Appendix C: Focus group preparatory survey

1. How old are you?
2. Where do you live?
3. What suburb do you live in?
4. How wealthy would you consider your family?
5. What is your family's annual income?
6. How much expendable income do you have every month?
7. Do you own a computer or laptop?
8. Do you have an mp3 player?
9. How do you connect to the internet?
10. Is the internet service you used uncapped or capped?
11. Do you use file sharing networks?
12. Do you download from the internet directly or do you use offline networks?
13. From what locations do you share or get files like (music, movies, TV programs, etc)?
14. Do you share files face to face (music, movies, TV programs, software)?
15. Have you every copied music, movies, TV programs or software to give to other people?
16. Has anyone copied music, movies, TV programs or software to give to you?
17. Who do you share these things with?
18. Do you consider file sharing and copying music, movies, TV programs or software to be bad?
19. Have you ever paid money for a copy of something?
20. Would you consider it worse to buy copies of music, movies, TV programs or software vs. freely sharing it with people without charge?
21. There are a few common justifications for file sharing and copying things like music, movies, TV programs and software that people use. Do you agree with any of the following arguments?

    i. Music CDs are overpriced so I don't feel too bad about getting music for free.

    ii. Record companies are greedy and rich and so I don't feel bad about getting their products for free.

    iii. People like 50 Cent, Madonna and Justin Timberlake are really rich anyway, I don't feel bad listen to their music for free because they have plenty of money.

    iv. I don't think it's that different from taping music off the radio or taping a TV show and that's why I don't think file sharing is bad.

    v. File sharing is actually good for musicians and people who make TV or movies, etc because its free publicity. Sales go up as a result of exposure.

    vi. I don't really see that file sharing hurts anyone. Where are the musicians going back to university to become accountants? Where are the movie production companies going out of business?

    vii. Companies like Microsoft are capitalists out to make lots of money and I disapprove of monopolistic big business, so I'm comfortable using their products without paying.

    viii. I heard that record companies treat musicians really badly, cheating them out of money and I don't feel bad about cheating a cheater.

22. Are any of these reasons that you file share?

i. I do it to save money. I get to enjoy music and movies, etc without spending money.

ii. I do it because it's convenient, I don't have to go rent a DVD or go to a shop.

iii. I do it so I can try music out first. If I really like it, I will often go out and buy the CD.

iv. I can watch TV shows just after they've aired in the US without waiting for local TV channels to show them.

v. I can find TV shows/music/movies that you can't get in South Africa through file sharing.

23. Do you buy CDs or DVDs from shops for yourself?

24. Do you buy fewer CDs or DVDs since you started file sharing?

25. Do you prefer owning the physical CD with printed inlay, etc or do you prefer having mp3 files in a directory on your computer?

26. How do you listen to music mostly?

27. Has the quality of mp3 music files ever bothered you?

28. Do you have a TV where you live?

29. Do any of these statement describe the effects downloaded TV has had on your broadcast TV watching?

30. Has the quality of downloaded video files every bothered you?

31. Have you bought mp3 files off an online store?

32. Would you ever be willing to pay for music in digital form?

33. If a legal service became available to you where you could get access to as much music as you like to download whenever, with a monthly fee you thought was reasonable, would you pay for this kind of service?

34. If this service cost R100 per month, what would your reaction be?

# Appendix D: Survey questions

## Section 1: Demographic information

01. Are you a UCT student?
    i. Yes.
    ii. No, I work at UCT.
    iii. Other.
02. How old are you?
    i. Enter number.
03. What is your sex?
    i. Male.
    ii. Female.
04. What is your race?
    i. White.
    ii. Black.
    iii. Coloured.
    iv. Indian.
    v. Asian.
    vi. Other (specify).
05. What is your nationality?
    i. South African.
    ii. Other (specify).
06. What faculty are you in?
    i. Commerce.
    ii. Engineering.
    iii. Health Science.
    iv. Humanities.
    v. Law.
    vi. Science.
07. Please indicate your highest qualification.
    i. Passed high school.
    ii. Undergraduate degree.
    iii. Honours degree.
    iv. Masters degree.
    v. Doctoral degree.

08. Where do you live?

    i. At home with family.

    ii. UCT student residence.

    iii. Student digs.

    iv. Other rented accommodation.

    v. Your own home (not-rented).

09. What suburb in Cape Town do you live in?

    i. Rondebosch.

    ii. Claremont.

    iii. Observatory.

    iv. Mowbray.

    v. Other (specify).

10. Do you personally own a computer or laptop?

    i. Yes.

    ii. No.

11. Rate your computer literacy level. Please choose the description that matches you best.

    i. I am a very basic computer user who can do a few things but need a lot of help. I am not confident with computers.

    ii. I'm a basic but confident user who knows how to use the internet well and a few applications. I still need help with problems.

    iii. I'm an intermediate user. I know several applications well and am good at working out how to use new ones. I don't often need help.

    iv. I'm an above average user. I know how to use a number of applications and work out how to use new ones easily. I can solve some computer problems that most people struggle with (e.g. finding out why a computer won't connect to the internet). I rarely need help.

    v. I'm an advanced computer user with at least some basic programming skills. It has been a while since I've needed anyone's help with a computer problem.

12. Do you own your own car?

    i. Yes.

    ii. No.

13. How wealthy is your family? These are rough descriptions, not all families are the same. Please consider the descriptions.

    i. Poor: you've struggled to get where you've got in life and your family have never had much.

    ii. Relatively poorer than average: your parents rent property or live in a reasonably cheap area. Your family might own an old car that has been kept going for some time.

    iii. Average: your family has an average middle class income. Your parents either own their home or are paying off their bond and own 1 or 2 cars.

    iv. Above average: your family has been a little better off than most. Your parents might own

more than 1 property and at least have a car each. They may have bought you your first car.

v. Wealthy: your family lives noticeably better than middle class families of average means. You parents own several properties and have bought you and your siblings cars. Family holidays overseas aren't uncommon for your family.

14. What is your father's job?

15. What is your mother's job?

**Section 2: Sharing patterns**

01. Do you use DC ++, Strong DC or another direct connect program to access DC (UCT's file sharing network)?

    i. Yes.

    ii. No.

02. How did you start using DC?

    i. Does not apply to me, I don't use DC.

    ii. A friend on campus showed me.

    iii. Someone who stayed in student residence introduced me to it.

    iv. I saw someone using it on campus and asked about it.

    v. Other.

03. How often do you connect to DC?

    i. My computer is permanently connected to the UCT network so I just leave it on.

    ii. At least once a day.

    iii. A few times a week.

    iv. Once a week.

    v. Once or twice a month.

    vi. Once every few months or so (or more infrequently).

04. Please rate these commonly shared items in terms of importance to you personally. Use the ranks, 'most important', 'somewhat important' and 'not important'. Items can share the same rank if they equally important or unimportant. .

    i. TV Series.

    ii. Movies.

    iii. Music.

    iv. Games.

    v. Software.

05. Do you use other peer to peer file sharing networks or programs other than DC?

    i. Yes.

    ii. No.

06. Do you share music, movies, TV series, games or software face to face (using burnable discs, flash

drives or portable hard drives)?

i. Yes.

ii. No.

07. In your social circle do you mostly supply your friends with shared material or it is the other way around? Indicate a proportion.

i. Receive 100%

ii. Share 20%, Receive 80%

iii. Share 50%, Receive 50%

iv. Share 80%, Receive 20%

v. Share 100%

08. If someone who downloads 3 or 4 TV episodes a week and the occasional music album or software package is considered a light user of file-sharing technology, which of the following would describe you?

i. Does not apply to me. I am not a direct user.

ii. A superlight user (rarely connected, seldom downloading).

iii. A light user (connects frequently, downloading a low volume).

iv. A medium user (connects often, downloading sporadically but quite a bit).

v. A heavy user (connects very often, downloading a lot, more than can be watched/used).

vi. Obsessive user (connected very often, downloading a huge amount. "I can't help it, it's all free").

09. Do you use the chat features of DC or other file sharing systems? Please choose the response that most closely reflects you.

i. I don't chat.

ii. I sometimes use the chat to request things or ask questions.

iii. I chat occasionally.

iv. I'm a regularly chatter.

10. Did you know that downloading copies of copyrighted material from file sharing networks is illegal?

i. Yes I did.

ii. No I didn't.

**Section 3: File sharing effects**

01. Leaving aside the fact that CDs and DVDs cost money and that file sharing is free; would you prefer to own original discs with the commercial printed packaging?

i. I always prefer owning the original discs with packaging.

ii. I always prefer having files on my computer.

iii. I prefer to own the commercially available product when I really like something but for other things, a file on my computer is fine.

iv. Other.

02. Which of the following statements describe how access to free music has effected your buying of music?

    i. I don't listen to music, this doesn't apply to me.

    ii. I only listen to pirated music but I've also never spent money on music.

    iii. I only listen to pirated music. I used to buy albums but I don't have to now that I can download it for free.

    iv. I still spend money on music but I buy much less. I only buy the stuff I really like or that I can't find online.

    v. I buy a lot of music while also listening to pirated music. I spend a bit less on music but still more than most people.

    vi. I still buy the same amount of music; pirating a bit of music hasn't changed my spending patterns.

    vii. I spend more on music now that I can try music out for free by downloading it.

    viii. I don't pirate music; my music collection is all legal.

03. Do you have a TV where you live?

    i. Yes.

    ii. No.

04. Which of these statements describe your watching of broadcast TV, now that you can download TV programmes?

    i. I don't watch TV, this doesn't apply to me.

    ii. I don't watch downloaded TV programmes but I do watch broadcast TV.

    iii. I watch about the same amount of broadcast TV that I used to, despite also watching downloaded TV programmes.

    iv. I probably watch less broadcast TV than I used to because I can download TV programmes.

    v. Watching downloaded TV has completely replaced watching broadcast TV in my life.

05. Which of these statements reflect how being able to download movies for free affects your cinema attendance?

    i. I don't go to the cinema, this doesn't apply to me.

    ii. I don't pirate movies. I go to the cinema, rent or buy DVDs.

    iii. I watch just as many movies at the cinema as I used to.

    iv. I still go to the cinema but less so; some movies you need to see on a big screen.

    v. I go to see more movies on the big screen. I find out about more movies through downloading them.

06. Which of these statements reflect your purchasing of computer or console games?

    i. I don't play games, this doesn't apply to me.

    ii. I don't spend money on games but I do play pirated games.

    iii. I used to buy games but I haven't bought one since I worked out how to get them for free.

    iv. I buy a few games but I mostly pirate them.

v. I buy as many games as I pirate.

vi. I mostly buy games but I have copied a few.

vii. I buy all the games that I play.

**Section 4: Attitudes**

01. How well do these common reasons for file sharing explain your file sharing? (Rate as: '1. doesn't apply to me', '2. Partial Explanation', '3. Good Explanation', and '4. Very Good Explanation)

    i. File sharing is the most convenient way to get what you want. I don't have to go to shop. Resent is the fastest way to get what I'm looking for (4.01.1).

    ii. It allows me to try things before I buy. This way I don't spend money on rubbish (4.01.2).

    iii. File sharing is a way to get access to a lot more than I can afford conventionally (4.01.3).

    iv. I don't have to wait for things to be available in South Africa; I can download things immediately after their release in the United States (sometimes even before release dates) (4.01.4).

    v. I get access to things that aren't commercially available in South Africa (4.01.5).

02. Regarding the previous question, are there any reasons you use file sharing services that are not mentioned?

03. Which of these descriptions apply to you?

    i. File sharer.

    ii. Pirate.

    iii. Thief.

    iv. Open source enthusiast.

    v. None of these, I'm just a normal person.

    vi. Other.

04. Are you equally happy to share anything on a file sharing network? Please comparatively rate the acceptability of sharing the following commonly shared material (1. unacceptable, 2. less acceptable, 3. acceptable):

    i. TV Series.

    ii. Movies.

    iii. Music.

    iv. Games.

    v. Software.

05. Rate your agreement with this statement: File sharing is stealing. 1 = Complete disagreement, 3 = being undecided/neutral and 5 = Complete Agreement.

    i. 1, 2, 3, 4, 5.

06. Under current copyright laws, using file sharing systems to gain free access to copyright material is illegal. How does this legal status make you feel? 1 = It bothers you and 5 = it doesn't both you.

    i. 1, 2, 3, 4, 5.

07. File sharing used to access copyright material is stealing according to the law. Many people argue stealing is immoral. What is your reaction to this claim? Please choose the response that most closely reflects your position.

    i. File sharing is stealing and immoral, just like stealing anything else.

    ii. File sharing is similar to stealing but is not as bad so it's more acceptable.

    iii. I'm not sure / undecided.

    iv. Stealing is immoral and unacceptable but file sharing isn't really stealing so it's acceptable.

    v. Stealing isn't that bad in certain circumstances and one of those is file sharing.

08. Rate your agreement with this statement: "The only important difference between file sharing and stealing from a shop is that there is a risk of getting caught when you're stealing from a shop. People download illegal copies of things because they think they won't get caught."

    i. 1, 2, 3, 4, 5.

09. Rate your agreement with this statement: "I'm a student; I don't have money in my budget to spend on luxuries like entertainment. If I can't afford music CDs or movie theatre tickets, I don't really think I'm hurting the people who make them by downloading them for free."

    i. 1, 2, 3, 4, 5.

10. The statement in the previous question suggests that file sharers might change their behaviour and start buying things when they have more money. Please choose the most applicable response to this, and be honest.

    i. Even when I have more money I'll probably download things for free. Why pay when I can get it for free?

    ii. When I am earning a salary I will buy a few more things than I do now but I probably won't stop getting things for free either.

    iii. If I can afford it in the future, I will probably rather buy most things but might also download a few things for free.

    iv. When my poorer days are behind me I'll stop copying and downloading things for free.

11. Rate your agreement with this statement: "Cultural products like music CDs and movies on DVD or at the cinema are completely overpriced. As a result I don't feel so bad about downloading copies of these things for free".

    i. 1, 2, 3, 4, 5.

12. Rate your agreement with this statement: "File sharing isn't bad for the music industry, its good. Every time you pass on a copy of an album or song, that's free publicity. If an album is shared a lot, it raises the public profile of the artist, positively influencing CD sales."

    i. 1, 2, 3, 4, 5.

13. Rate your agreement with this statement: "I'm actually quite comfortable using software made by really big companies without paying for it, whether the consequences are good or bad for them. Monopolies are bad for economies and even if I did care what happened to giant software companies, enough people buy their products anyway."

    i. 1, 2, 3, 4, 5.

14. Rate your agreement with this statement: "Major label music stars have enough money so I don't feel bad about not paying for their music. People like Jay-Z or Britney Spears have made millions which should be enough for anyone. You can't do any harm to these people by downloading their music for free."

i. 1, 2, 3, 4, 5.

15. Rate your agreement with this statement: "I feel bad for local and small music artists, I think it's bad to copy their music free".

    i. 1, 2, 3, 4, 5.

16. Rate your agreement with this statement: "These companies complaining about people 'stealing' their products are bunch of greedy capitalists. They are just trying to squeeze as much money out of people as they can. I don't care about downloading their products for free, even if it is stealing."

    i. 1, 2, 3, 4, 5.

17. Rate your agreement with this statement: "I just don't believe that file sharing has any real consequences. Some argue it does harm to some industries, others argue it doesn't. I'll probably feel fine about file sharing as long I can't see it really doing any damage.

    i. 1, 2, 3, 4, 5.

18. Rate your responses to this statement: "An mp3 isn't something physical that you can touch. It's just there on the internet or on my computer. There's something about sharing things that physically exist that makes file sharing not seem like such a bad thing.

    i. 1, 2, 3, 4, 5.

19. Rate your agreement with this statement: "Selling burnt CD copies of music as a business is not right because you're basically making money from some else's hard work".

    i. 1, 2, 3, 4, 5.

20. Rate your agreement with this statement: "It bothers me when other DC users just download what they need and never contribute material that other people might want (leeching). Don't they realise the system works only if everyone chips in a little?"

    i. 1, 2, 3, 4, 5.

21. Rate your agreement with this statement: "All my peers download stuff for free off the internet, it's just normal these days."

    i. 1, 2, 3, 4, 5.

22. Rate your agreement with this statement: "Information should be free. That is all that file sharing is, setting information free."

    i. 1, 2, 3, 4, 5.



**Section 5: Competition entry**

01. If there is anything you would like to add regarding your opinion on file sharing, please do it here. For example if you have a philosophy on file sharing, please share it.

02. For competition entry purposes, supply a cell phone number and an email address.

# Appendix E: Consent form

## Interview consent form

**Research Project:** Attitudes surrounding file sharing and copyright violation.

**Researcher:** Amrik Cooper, 0768919802, filesharingresearch@gmail.com

**Request for participation involving:**

- A candid discussion of your experience of non-commercial copyright violation and file sharing.
- Permission to record our discussion for later transcription and use in my study.

**This agreement also promises the following:**

- I have no affiliation with any law enforcement organisation.
- I have no vested interest in the enforcement of copyright law.
- The study I am producing is for the completion of my master's degree.
- You shall remain anonymous in my study.
- The specific details of our discussion will remain confidential (names, places, etc.)
- You may have a copy of the recording of our conversation as well as the final version of my thesis upon request.
- The audio recording will be destroyed at later date, no later than the submission date of my thesis (September 2010).

**Impact and Readership:**

- My thesis will be read by at least a handful of people; my supervisor, two markers and maybe a few others.
- I will attempt to try and turn a chapter or two of my dissertation into journal articles which should have a larger readership.
- My intention with this study is a better understanding of casual copyright violation as a social behaviour.

Agreement:

_____ _____

Signature of respondent Date

# Appendix F: Website contents

## Home page

## 1. Welcome

Thanks for visiting this site. This is a portal to a short survey that looks at issues around illegal file sharing and non-commercial copyright violation with a small prize of R500 in cash for one person who completes the survey.

This survey is completely confidential. No personally identifying information is asked for and this site records no information about you or your location. This survey is for academic purposes only and is part of a master's thesis. The author has no vested interest in the enforcement of copyright law. An email address is required for competition entry. These email addresses will not be shared with anyone and will be deleted once the prize has been awarded.

Click here to go to the survey. Look over the competition rules from the link on the navigation menu on the left.

For more information see the Confidentiality and Consent page or the Competition Rules or email: filesharingresearch@gmail.com

What's This About?

This research project attempts to deal with questions like:

- Is file sharing stealing?
- Are file sharers criminals?
- Is file sharing immoral?
- Why do so many people routinely break the law through copyright violation?
- If file sharers don't think they're doing anything bad, what do they think?

File sharing is a very topical and discussion-provoking issue for several major industries in world who argue that their businesses are jeopardy because people freely exchange their products online. With the growth of the internet and digital products, a new low-cost system of distribution has emerged that regular people have started using in the form of peer-to-peer networks.

The position of the Motion Picture Association of America (MPAA) is made plain in a 2004 promotional video with the following script:

"YOU WOULDN'T STEAL A CAR
YOU WOULDN'T STEAL A HANDBAG
YOU WOULDN'T STEAL A TELEVISION
YOU WOULDN'T STEAL A DVD
DOWNLOADING PIRATED FILMS IS STEALING
STEALING IS AGAINST THE LAW"

The aim of this study is to explore the reactions of file sharers to these kinds of messages and arguments as well as to find out what they really think about what they do. The way you understand what you do and the reasons why you do what you do are central to understanding file sharing.

Promoting clear understanding of file sharing as a behaviour and not just a problem is the ultimate goal of this study. This study is part of a master's thesis.

## 2. Survey

See Appendix C.

## 3. Confidentiality and consent

By completing this survey you understand that the following assurances are made to you:

- The author of this study has no affiliation with any law enforcement organisation.
- The purpose of this study is solely academic.
- This survey is part of a master's thesis.
- Your responses to this survey are confidential and anonymous.
- Only the broad trends within the collective responses to this survey will be reflected in the final thesis rather than specific responses.
- By participating in this study you are not subjecting yourself to any risks, legal or otherwise.



### 4. Competition rules

- This survey uses a R500 cash prize to motivate responses.
- About 300 - 500 responses are required after which the prize winner will be randomly chosen.
- To give enough time to get enough responses the winner will be selected no later than the 1st of August 2010.
- The winner has a week to respond to claim the prize after which another random selection will follow.
- To enter the competition you need to supply some contact information on the last page of the survey.
- You can respond to the survey without entering the competition, supplying contact information isoptional but necessary to stand a chance to win the prize (how else can you win the prize if you cannot be contacted?)
- You may only submit one response to the survey.
- Prior to selecting a winner, the survey data will be screened for illogical random responses which will be filtered out of the data and be excluded from the competition. This is nothing to worry about if you think about each question and answer properly.

- Repeat entries will be discounted and can be grounds for exclusion from the prize draw.
- With the aim of showing that this is a fair and honest competition, if the winner agrees, an announcement will be publicised on DC saying who won (using their DC nickname)
- Boost your chances of winning the competition:
- Refer a friend and get another entry; get them to add the email address you entered with after their comments in the open question at the end (5.01).
- If a friend you referred wins the prize, you get a consolation prize of R250 in cash.

### 5. Copyright law in South Africa

This page is here to just give you a little bit of information about copyright law. This is not here to discourage you from doing anything; if you wish to continue file sharing, that is your prerogative. It is merely good to know what one is doing seeing as copyright violation is illegal.

Copyrights are laws put in place to give creators ownership over their creations (books, songs, TV programmes, software, computer games, etc...). A copyright is a right over copying something. If you are not the copyright holder, copyright law says you must pay for a copy of their work. In theory, copyrights are there to encourage people to create things that make society better or richer.

Copyright violation in South Africa is illegal and punishable under South African law. However, copyright violation is a civil liability as opposed to a criminal liability. This means that the state has no power to prosecute you; only the copyright holder themselves or a legal representative thereof can make charges of copyright violation against an individual.

Although legal text is often long and boring it is sometimes good to know what the law says as ignorance of the law is not a defence. Attached below is a copy of the South African copyright act. Download it and peruse it at your leisure.

## 6. Contact

If you have any queries about this site, email filesharingresearch@gmail.com

# Appendix G: Survey data results

1.01 Are you a UCT student?

Yes: 9.87%2 and No - 2.13%.

1.02 How old are you?

Average: 21.54 and Mean: 20.

1.03 What is your sex?

Male: 59.35% and Female: 39.65%.

1.04 What is your race?

White: 49.46%, Black: 28.72%, Coloured: 9.04%, Indian: 9.04% and Asian: 3.72%.

1.05 What is your nationality?

South African: 80.85%, African: 14.36% and international students: 4.78%

1.06 What faculty are you in?

Commerce: 16.48%, engineering: 21.8%, health sciences: 7.97%, humanities: 31.91%, law: 2.65% and science: 19.14%.

1.07 Please indicate your highest qualification.

High school: 67.37%, undergraduate: 19.25% honours: 9.62%, masters: 2.13 and doctoral: 1.60%.

1.08 Where do you live in Cape Town?

Student residence: 38.3%, with parents: 31.38%, student *digs*: 8.51%, other rented: 17.02% and own home: 4.79%.

1.10 Do you personally own a computer or laptop?

Yes: 94.14% and no: 5.85%.

1.11 Rate your computer literacy level.

Very basic: 1.06%, basic: 7.44%, intermediate: 22.34%, above average: 38.82% and advanced: 30.31%.

1.12 Do you own your own car?

Yes: 36.70% and no: 63.29%.

1.13 How wealthy is your family? Choose the option that best describes your family.

Poor: 5.31%, below average: 5.31%, average: 50.53%, above average: 32.97% and wealthy: 5.85%.

1.14 What is / was your father's job?

Predominantly middle class and professional occupations.

1.15 What is / was your mother's job?

Predominantly middle class and professional occupations.

2.01 Do you use DC ++, Strong DC or another direct connect program to access DC (UCT's file sharing network)?

Yes: 76.06% and no: 23.94%.

2.02 How did you start using DC?

N/A: 25.53%, abused the open question: 0.53%, campus friend: 34.57%, through student residence 29.79%, seeing it others do it: 6.38%, private Initiative: 2.13% and through a sibling: 1.06%.

2.03 How often do you connect to DC?

N/A: 26.06%, permanently connected: 20.21%, once a day: 18.09%, a few times a week: 12.23%, once a week: 6.38%, once a month: 9.57% and every few months: 7.45%.

2.04 Please rate these commonly shared items in terms of importance to you personally. Use the ranks,

'most important', 'somewhat important' and 'not important'. Items can share the same rank if they equally important or unimportant.

| Question | Class | Not Important | Somewhat Important | Most Important | Cumulative Importance |
|---|---|---|---|---|---|
| 2.04.1 | TV series | 6.99% | 32.26% | 60.75% | 93.01 |
| 2.04.2 | Movies | 10.75% | 43.01% | 46.24% | 89.25 |
| 2.04.3 | Music | 19.35% | 36.56% | 44.09% | 80.65 |
| 2.04.4 | Games | 61.83% | 31.18% | 6.99% | 38.17 |
| 2.04.5 | Software | 40.32% | 39.25% | 20.43% | 59.68 |

2.05 Do you use other peer to peer file sharing networks or programs other than DC?

Yes: 37.77% and no: 62.23%

2.06 Do you share music, movies, TV series, games or software face to face (using burnable discs, flash drives or portable hard drives)?

Yes: 85.64% and no: 14.36%.

2.07 In your social circle do you mostly supply your friends with shared material or it is the other way around? Indicate a proportion.

5/5 leech: 12.23%, 4/5 leech: 13.83%, equal: 43.62%, 4/5 seeding: 18.62% and 5/5 seeding: 11.7%.

2.08 If someone who downloads 3 or 4 TV episodes a week and the occasional music album or software package is considered a light user of file-sharing technology, which of the following would describe you?

N/A: 9.04%, superlight user: 18.62%, light user: 29.79%, medium user: 25.53%, and heavy user: 17.02%.

2.09 Do you use the chat features of DC or other file sharing systems? Please choose the response that most closely reflects you.

Don't chat: 56.38%, only to make request or ask questions: 25%, occasional: 11.17% and regular: 7.45%.

2.10 Did you know that downloading copies of copyrighted material from file sharing networks is illegal?

Yes: 91.49% and no: 8.51%.

3.01 Leaving aside the fact that CDs and DVDs cost money and that file sharing is free; would you prefer to own original discs with the commercial printed packaging?

| Question 3.01 responses | Percentage |
|---|---|
| I always prefer owning the original discs with packaging. | 22.04% |
| I always prefer having files on my computer. | 20.97% |
| I prefer to own the commercially available product when I really like something but for other things, a file on my computer is fine. | 55.38% |
| No preference (coded retrospectively through open response). | 1.61% |

3.02 Which of the following statements describe how access to free music has effected your buying of music?

| Question 3.02 responses | Percentage |
|---|---|
| I don't listen to music, this doesn't apply to me. | 3.19% |
| I only listen to pirated music but I've also never spent money on music. | 20.21% |
| I only listen to pirated music. I used to buy albums but I don't have to now that I can download it for free. | 19.15% |
| I still spend money on music but I buy much less. I only buy the stuff I really like or that I can't find online. | 39.89% |
| I buy a lot of music while also listening to pirated music. I spend a bit less on music but still more than most people. | 4.79% |
| I still buy the same amount of music; pirating a bit of music hasn't changed my spending patterns. | 3.72% |
| I spend more on music now that I can try music out for free by downloading it. | 5.85% |
| I don't pirate music; my music collection is all legal. | 3.19% |

3.03 Do you have a TV where you live?

Yes: 76.06 and no: 23.94%.

3.04 Which of these statements describe your watching of broadcast TV, now that you can download TV programmes?

| Question 3.04 responses | Percentage |
|---|---|
| I don't watch TV, this doesn't apply to me. | 17.55% |
| I don't watch downloaded TV programmes but I do watch broadcast TV. | 9.57% |
| I watch about the same amount of broadcast TV that I used to, despite also watching downloaded TV programmes. | 27.13% |
| I probably watch less broadcast TV than I used to because I can download TV programmes. | 25.53% |
| Watching downloaded TV has completely replaced watching broadcast TV in my life. | 20.21% |

3.05 Which of these statements reflect how being able to download movies for free affects your cinema attendance?

| Question 3.05 responses | Percentage |
|---|---|
| I don't go to the cinema, this doesn't apply to me. | 17.55% |
| I don't pirate movies. I go to the cinema, rent or buy DVDs. | 9.57% |
| I watch just as many movies at the cinema as I used to. | 27.13% |
| I still go to the cinema but less so; some movies you need to see on a big screen. | 25.53% |
| I go to see more movies on the big screen. I find out about more movies through downloading them. | 20.21% |

3.06 Which of these statements reflect your purchasing of computer or console games?

| Question 3.06 responses | Percentage |
|---|---|
| I don't play games, this doesn't apply to me. | 45.74 |
| I don't spend money on games but I do play pirated games. | 13.3 |
| I used to buy games but I haven't bought one since I worked out how to get them for free. | 5.32 |
| I buy a few games but I mostly pirate them. | 11.7 |
| I buy as many games as I pirate. | 3.72 |
| I mostly buy games but I have copied a few. | 8.51 |
| I buy all the games that I play. | 11.7 |

4.01 How well do these common reasons for file sharing explain your file sharing? (Rate as: '1. doesn't apply to me', '2. Partial Explanation', '3. Good Explanation', and '4. Very Good Explanation).

| Question | Question phrasing | N/A | Partial | Good | Very Good |
|---|---|---|---|---|---|
| 4.01.1 | File sharing is the most convenient way to get what you want. I don't have to go to shop. DC is the fastest way to get what I'm looking for (*convenience*). | 8.6% | 20.97% | 32.26% | 38.17% |
| 4.01.2 | It allows me to try things before I buy. This way I don't spend money on rubbish (*sampling*). | 25.26% | 20.97% | 27.96% | 25.81% |
| 4.01.3 | File sharing is a way to get access to a lot more than I can afford conventionally (*maximising consumption*). | 6.44% | 14.52% | 27.96% | 51.08% |
| 4.01.4 | I don't have to wait for things to be available in South Africa; I can download things immediately after their release in the US, sometimes even before release dates (*early release*). | 8.07% | 11.83% | 24.19% | 55.91% |
| 4.01.5 | I get access to things that aren't commercially available in South Africa (*extended access*). | 9.13% | 14.52% | 25.27% | 51.08% |

4.02 Regarding the previous question, are there any reasons you use file sharing services that are not mentioned?

Various responses not included because of not being discussed in detail due to space constraints.

4.03 Which of these descriptions apply to you?

| Question 4.03 responses | Freq. | Percent | Cum. |
|---|---|---|---|
| None of these, I'm a normal person. | 67 | 36.02 | 36.02 |
| File sharer | 65 | 34.95 | 70.97 |
| Pirate | 7 | 3.76 | 74.73 |
| Thief | 2 | 1.08 | 75.81 |
| Open Source Enthusiast | 45 | 24.19 | 100 |
| Total | 186 | 100 | |

4.04 Are you equally happy to share anything on a file sharing network? Please comparatively rate the acceptability of sharing the following commonly shared material (1. unacceptable, 2. less acceptable, 3. acceptable).

| Question | Class | Unacceptable | Less acceptable | Acceptable |
|---|---|---|---|---|
| 4.04.1 | TV | 5.38% | 10.75% | 83.87% |
| 4.04.2 | Movies | 6.45% | 19.89% | 73.66% |
| 4.04.3 | Music | 6.99% | 19.89% | 73.12% |
| 4.04.4 | Games | 9.68% | 26.34% | 63.98% |
| 4.04.5 | Software | 13.44% | 27.96% | 58.6% |

**Likert scale question summary**

| Survey Question Number | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 4.05 | "File sharing is stealing." | 17.2 | 24.19 | 31.73 | 15.59 | 11.29 |
| 4.06 | "Under current copyright laws, using file sharing systems to gain free access to copyright material is illegal. How does this legal status make you feel?" | 10.22 | 21.5 | 26.34 | 16.67 | 25.27 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4.08 | "The only important difference between file sharing and stealing from a shop is that there is a risk of getting caught when you're stealing from a shop. People download illegal copies of things because they think they won't get caught." | 29.57 | 16.13 | 16.13 | 19.35 | 18.82 |
| 4.09 | "I'm a student; I don't have money in my budget to spend on luxuries like entertainment. If I can't afford music CDs or movie theatre tickets, I don't really think I'm hurting the people who make them by downloading them for free." | 9.14 | 13.44 | 18.82 | 33.33 | 25.27 |
| 4.11 | "Cultural products like music CDs and movies on DVD or at the cinema are completely overpriced. As a result I don't feel so bad about downloading copies of these things for free". | 3.76 | 7.53 | 17.74 | 30.65 | 40.32 |
| 4.12 | "File sharing isn't bad for the music industry, its good. Every time you pass on a copy of an album or song, that's free publicity. If an album is shared a lot, it raises the public profile of the artist, positively influencing CD sales." | 6.45 | 16.13 | 27.96 | 29.57 | 19.89 |
| 4.13 | "I'm actually quite comfortable using software made by really big companies without paying for it, whether the consequences are good or bad for them. Monopolies are bad for economies and even if I did care what happened to giant software companies, enough people buy their products anyway." | 10.22 | 16.13 | 27.95 | 23.66 | 22.04 |
| 4.14 | "Major label music stars have enough money so I don't feel bad about not paying for their music. People like Jay-Z or Britney Spears have made millions which should be enough for anyone. You can't do any harm to these people by downloading their music for free." | 9.14 | 13.98 | 27.95 | 25.81 | 23.12 |
| 4.15 | "I feel bad for local and small music artists, I think it's bad to copy their music free" | 8.6 | 9.68 | 20.97 | 29.03 | 31.72 |
| 4.16 | "These companies complaining about people 'stealing' their products are bunch of greedy capitalists. They are just trying to squeeze as much money out of people as they can. I don't care about downloading their products for free, even if it is stealing." | 13.98 | 18.28 | 31.72 | 22.58 | 13.44 |
| 4.17 | "I just don't believe that file sharing has any real consequences. Some argue it does harm to some industries, others argue it doesn't. I'll probably feel fine about file sharing as long I can't see it really doing any damage." | 8.6 | 17.2 | 26.89 | 31.72 | 15.59 |
| 4.18 | "An mp3 isn't something physical that you can touch. It's just there on the internet or on my computer. There's something about sharing things that physically exist that makes file sharing not seem like such a bad thing. | 14.52 | 16.13 | 19.89 | 33.33 | 16.13 |
| 4.19 | "Selling burnt CD copies of music as a business is not right because you're basically making money from some else's hard work" | 3.23 | 4.3 | 10.75 | 20.43 | 61.29 |
| 4.20 | "It bothers me when other DC users just download what they need and never contribute material that other people might want (leeching). Don't they realise the system works only if everyone chips in a little?" | 5.38 | 8.6 | 30.65 | 26.88 | 28.49 |
| 4.21 | "All my peers download stuff for free off the internet, it's just normal these days." | 1.61 | 3.76 | 16.14 | 33.87 | 44.62 |
| 4.22 | "Information should be free. That is all that file sharing is, setting information free." | 8.06 | 11.83 | 27.96 | 29.57 | 22.58 |

4.07 File sharing used to access copyright material is stealing according to the law. Many people argue stealing is immoral. What is your reaction to this claim? Please choose the response that most

closely reflects your position.

| Question 4.07 responses | Percent |
|---|---|
| File sharing is stealing and immoral, just like stealing anything else. | 9.04% |
| File sharing is similar to stealing but is not as bad so it's more acceptable. | 22.87% |
| I'm not sure / undecided. | 21.28% |
| Stealing is immoral and unacceptable but file sharing isn't really stealing so it's acceptable. | 39.36% |
| Stealing isn't that bad in certain circumstances and one of those is file sharing. | 7.45% |

4.10 The statement in the previous question suggests that file sharers might change their behaviour and start buying things when they have more money. Please choose the most applicable response to this, and be honest.

| Question 4.10 responses | Percent |
|---|---|
| Even when I have more money I'll probably download things for free. Why pay when I can get it for free? | 13.44% |
| When I am earning a salary I will buy a few more things than I do now but I probably won't stop getting things for free either. | 39.25% |
| If I can afford it in the future, I will probably rather buy most things but might also download a few things for free. | 31.72% |
| When my poorer days are behind me I'll stop copying and downloading things for free. | 15.59% |