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The High Seas (C's) of Music Piracy in Information Systems: Cost, convenience and choice

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Abstract

Systems and technologies used for unauthorised file sharing have received little attention in the Information Systems literature. This paper attempts to fill this gap by presenting a critical, qualitative study on the motivations for using unauthorised file sharing systems. Based on 30 interviews with music consumers, musicians, and the music industry, this paper reports on the decision of music consumers to 'pirate or purchase'. This paper highlights file sharing from multiple perspectives of users, musicians, and representatives from the music recording industry. Three main themes emerged on the cost, convenience and choice as motivators for unauthorised file sharing.

Keywords

Ethnography, qualitative, critical, file sharing, culture

INTRODUCTION

Information systems to access music on the Internet are not well researched academically (Kinnally, Lacayo, McClung and Sapolsky 2008) even through the emergence of new technologies used for activities such as unauthorised file sharing raise ethical questions (Forester and Morrison 1994; Light, McGrath and Griffiths 2008). Limited research exists on all types of Internet music access, and the growth of unauthorised file sharing (or piracy) is an area of concern needing more attention by researchers from a range of disciplines (Andersen and Frenz 2007; Klimis and Wallis 2009).

A number of empirical studies relating to piracy have been published based on quantitative analysis from a positivist perspective (Sandararajan 2004; Chidambaram and Tung 2005; Bagchi, Kirs and Cerveny 2006; Smith and Telang 2009), however few empirical interpretive or critical qualitative studies have been published in information systems. These studies provide a useful perspective of the economics of unauthorised file sharing and digital sales; this paper extends this research to understand attitudes and motivations that lead to those economics.

This study reveals three main motivators for choosing to purchase or to file share (pirate) music online: they are cost, convenience, and choice. These three criteria form the basis for decision making about whether to buy music legally or to download and file share it without authorisation by the content owner (illegal). A finding of this study and contribution of this research is the identification of a specific reason for choosing file sharing, that of scarcity. This concept has not been discussed in any significant way in the literature and it complements the concepts of sampling and substitution identified as motivations for file sharing in the literature (Andersen and Frenz 2007).

This study benefits from a critical approach, which has roots in information systems research in the Marxist view of society as a series of class struggles (Orlikowski and Baroudi, 1991). This approach views current social arrangements as not in everyone's interest, with a view to improving them (Stahl, 2008). However such an approach is often perceived to be on the political left, which some researchers find problematic. This paper disagrees that this is problematic, rather it is argued that this approach provides a useful perspective for the study of unauthorised file sharing systems and subcultures, helping to reconceptualise their users/members who have are viewed as deviant from mainstream society and labelled as 'pirates'. While this paper does not advocate unauthorised file sharing / piracy, it does argue that it is not productive to ignore a large number of information systems users. The critical approach enables us to challenge conventional notions of music distribution and consumption, including the fairly recent in history taken for granted notion of music as a commodity.

The file-sharing company BitTorrent recently announced that it facilitated 124,191,862 legal music downloads in the first six months of 2012 (31% of all BitTorrent downloads over the same six months, according to MusicMetric (405 million). Previous research has highlighted the sophisticated design of some unauthorised

file sharing systems (Beekhuyzen and von Hellens 2009), the principles of which, it is argued, can be applied to legal systems for accessing online music (and also to authorised file sharing[1] of such files on BitTorrent). Therefore, understanding the motivations of users is useful. To put such motivations and activities in context, this paper provides a cross-sectional view of unauthorised file sharing motivations by users (uploaders/downloaders), musicians, and representatives from the music recording industry.

LITERATURE
A review of the IS literature reveals a gap in online collaboration applied to unauthorised file sharing which this paper attempts to fill by presenting a critical, empirical study based on the analysis of qualitative data, providing rich insights (Walsham 1995) into motivations for using unauthorised file sharing systems.

One significant exception to the lack of discussion of unauthorised file sharing in the highest ranked information systems journals is the ongoing dialogue presented in the Communications of the ACM over the past two decades. In 1984, Franz and Robey (1984) argued that the development of user-led systems are often politically motivated. He was discussing insurance systems, but this statement is equally applicable to online systems available at the time for sharing music (unauthorised file sharing systems have existed for decades (Biddle, England, Peinado and Willman 2002; Beekhuyzen, von Hellens and Nielsen 2011)). Bakos (1998) then discussed the emerging role of electronic marketplaces on the Internet, which he believed precipitated a dramatic reduction in the marginal costs of production and distribution for music and other digital goods. This argument by Bakos was strongly supported in the last decade, with the costs of production and distribution of digitally distributed music costing significantly less than physically distributed music.

Bhatnagar, Misra, and Rao (2000) talked about the risks and conveniences of Internet shopping in these electronic marketplaces, concluding that the effects of convenience and risk on channel choice patterns are moderated by individual demographic factors. Expanding on the work of Bakos (1998), they identify segments of electronic markets in which risk aversion to the Internet is the highest. Lam and Tan (2001) then theorized about how the Internet was changing the music industry. They discussed the changing role of traditional music retailers, changes in industry competition, and the new ways consumers could access music.

The insightful article by Lee (2003) is one of the first attempts to empirically examine peer-to-peer file sharing from an end-user perspective. Prior to this, file sharing systems were studied mostly from a technical or legal perspective. However Lee argues, "understanding what aspects of these systems really matter to the user is critical for designing better systems"; this topic is important to study due to the significant amount of monetary investment in such systems, and the need to know what potential users of these systems consider important.

Also in 2003, Premkumar (2003) presented a comprehensive analysis of alternative strategies for music distribution. The informative article argued that educating the public on copyrights and the impact of illegal copying on the music industry is critical to ensure the music industry remains healthy, and incentives exist for artists to create new music. In a later article, von Lohman (2004) also appears to disagree with Premkumar's perspective by arguing that "the legal battles surrounding peer-to-peer file sharing are a losing proposition for everyone". He proposes a collective licensing scheme for music distribution, arguing that any proposed solution needs to be premised on the following four concepts:

- Artists and copyright holders deserve to be compensated fairly
- File sharing is here to stay
- Fans do a better job than the record labels of making music available to one another
- Any solution should minimize government intervention in favor of market forces to the greatest extent.

In order to study the motivations for unauthorised file sharing in an information systems context, it is necessary to build upon these discussions in the IS literature and also to draw on discussions on file sharing by key authors in the literature of reference disciplines including sociology (Kretschmer and Pratt, 2009), law (Bhattacharjee, Gopal, Lertwachara and Marsden, 2006), economics (Rob and Waldfogel, 2006), and political science (Zentner, 2006).

Cost, Convenience and Choice
This study contributes by presenting the concepts of cost, convenience and choice together as a way of explaining the motivations for unauthorised file sharing and for using specific types of information systems for file sharing. These three concepts have not been identified in the literature in combination previously; therefore this conceptualisation extends current research on unauthorised file sharing systems and activities, and it is a contribution of this study. To illustrate this argument, the relevant literature is discussed.

The important 1958 marketing study by Kelley (1958) differentiates between commodity costs and convenience costs, but falls short of discussing issues of issues of choice. The more recent study of CD music purchase

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[1] Until recently, all files shared via BitTorrent were considered unauthorised (illegal)

behaviour of P2P users by Sandulli (2007) examined price (cost) and choice (discussed as "assortment") in P2P and CD consumption, with no mention of convenience. Berry, Seiders and Grewal's (2002) comprehensive and multidimensional conceptualisation of service convenience is insightful and complimentary but narrow in focus.

In other areas of commerce, such as consumer health plan choices; research focuses on the costs and quality dimensions of purchases. Scanlon, Chernew and Lave (1997) argue that little is known about how individuals use information other than price in the decision making process, and there is no mention of convenience or choice. Degeratu, Rangaswamya and Wub (2000) compare consumer choice behaviour in online and traditional supermarkets, investigating how different store environments (online and traditional stores) can differentially affect consumer choices. They consider cost and choice, but also do not consider convenience. When looking at consumer behaviour specifically on the Internet, it is argued that the convenience of the Internet is an attraction. Bhatnagar, Misra and Rao (2000) present a framework for understanding the effects of convenience and risk on channel choice patterns, but left out of the discussion is product choice and cost. It is therefore argued that the combined concepts of cost, convenience and choice as motivators for accessing music online have not previously been identified, nor have they comprehensively been discussed in combination in reference disciplines.

More closely related to the topic of unauthorised file sharing, sampling and substitution are identified as motivations for unauthorised. To sample is to 'try before you buy', and to substitute is to download instead of purchasing (Andersen and Frenz 2007; Quiring, von Walter and Atterer 2008). Both are acknowledged to be hurting the music recording industry, however it is argued in the literature that sampling can actually increase sales (Gran and Molde 2009), and substitution may not harm the industry as much as reported (Lessig 2004), because those that substitute, may not have purchased the full album anyway. Lessig (2004) argues that people are motivated to use unuathorised file sharing networks for four primary reasons:

- As substitutes for purchasing content: users who download instead of purchasing (A).
- To sample music before purchasing it: sharing could increase the quantity of music purchased (B).
- To get access to copyrighted content that is no longer sold or that they would not have purchased because the transaction costs off the Net are too high (C)
- To get access to content that is not copyrighted or that the copyright owner wants to give away (D).

From the perspective of the law, Lessig argues that only (D) sharing is clearly illegal. From an economic perspective, only (A) sharing is clearly harmful. (B) sharing is illegal but plainly beneficial, and (C) sharing is illegal, yet good for society (since more exposure to music is good) and harmless to the artist (since the work is not otherwise available). While this paper does not advocate the illegal theft of music, it does propose a reconceptualisation of the concept of 'piracy' to consider unauthorised filesharing activities as daily activities involving technology conducted by a significant group of users. It is argued that it is not productive to ignore an important group of users involved in a widespread activity that will not go away if we simply ignore it, or prosecute those involved. Therefore this research is significant as it fills a gap in the information systems literature on unauthorised file sharing systems, and more generally online communities and collaboration.

APPLYING A CRITICAL LENS TO FILE SHARING RESEARCH

In order to reconceptualise unauthorised file sharing, we draw on Howcroft & Trauth (2004) who illustrate the contribution of critical research in IS by demonstrating the ways in which the research questions, approaches and findings change when the lens shift from positivist to interpretive to critical. We examine motivations for unauthorised file sharing from a critical epistemology.

The critical theory approach which was first grounded in the Frankfurt School, then presented and extended by Habermas (1984) and later by Ngwenyama and Lee (1997) in the context of information systems. In this study, a critical approach is used to reconceptualise unauthorised file sharing and the information systems that support these activities. As some of the principles of interpretive research are equally applicable to critical research (Stahl, 2008), this research is based on the interpretivist ontology that considers reality as subjective and socially constructed. Thomas (1993:p16) argues that subjective does not mean 'whatever the researcher thinks': it means objectively reporting on the subjectivity of our subjects.

In arguing that the critical approach is not 'another paradigm', it can be characterised by "an intention to change the status quo, overcome injustice and alienation, and promote emancipation" (Stahl, 2008), and it includes an overt political struggle against oppressive social structures (Harvey, 1990:20). The concept of emancipation within critical research has been heavily criticized in the literature, therefore it is not a core concept in this research; however the approach of questioning common sense assumptions to give voice to those marginalised technology users (unauthorised file sharers in this case – those uploading and downloading) is a relevant and insightful approach. Therefore this paper argues for a reconceptualization of unauthorised file sharing. Lessig's (2001; 2004) work is a useful way to reconsider unauthorised file sharing from a critical perspective.

METHODOLOGY

This study is based on thirty semi-structured interviews with sixteen tertiary students, six musicians and eight music recording industry stakeholders. All interviews lasted between 60-90 minutes, were transcribed verbatim, and NVivo aided the data analysis. The sixteen unauthorised music file sharers gave insight to motivations for sharing and their chosen technology. The eight key informants from the music recording industry commented on mainstream Australian music culture and how the emergence of digital distribution has changed the way music reaches consumers. The six musicians provided insights on using Internet technologies to distribute their music. These interviews are the focus of this paper, and they were also useful to situate unauthorised file sharing activities within a wider music culture. This study also consisted of participant observations of an unauthorised file sharing community, however these are not presented in this paper (Beekhuyzen, von Hellens and Nielsen 2012).

There have been a number of studies that focus on the downloading behaviour of tertiary students (Remington 2006; Rob and Waldfogel 2006). Undergraduate students were the focus of the majority of the interviews in this study for a number of reasons; they are uniquely immersed in the World Wide Web and in computer technologies in general as a part of their educational experiences; they regularly participate in newsgroups and use Instant Messaging and email to communicate; the conflict over the effects of music downloading primarily involved the popular music that is marketed to, and consumed by, young people; legal actions and educational campaigns have been focused on students (Kinnally et al. 2008).

RESULTS

The following discussion presents the results of the study, discussing the motivations and activities in unauthorised file sharing from the multiple perspectives of users, musicians, and representatives from the music recording industry. Considering file sharing from a critical perspective reminds us that paying for music is a relatively new practice. Music was not always a commodity as it is today; for example, Mozart was not paid for his performances and the music he produced per se, he was sponsored as a cultural product (and reportedly earned very little).

Figure 1 highlights the findings based on constructs grounded in the literature, which emerged from the data analysis: representing the three motivations for unauthorised file sharing. Cost refers to the affordability of music content and the technologies to access it; convenience refers to the interoperability of the music content and the quality of the experience when accessing it; choice refers to the availability of music content and its availability in the desired format (lossless formats e.g. FLAC).
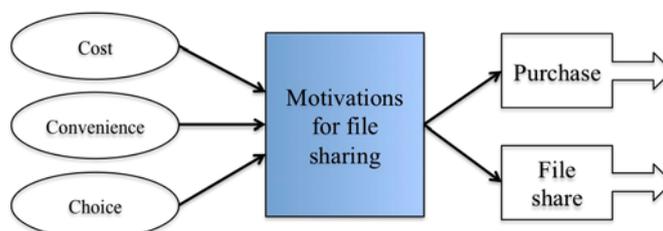

Figure 1: Motivations for unauthorised file sharing

Costs – The Value of Digital and Physical Music

Consumers evaluate the costs of physical and digital music on value for money. Compact Discs (CDs) are perceived as overpriced in Australia, with prices at $30 each, and imports more expensive for those interested in specific genres not available for sale in Australia. These high costs can turn those who genuinely want to purchase music to unauthorised file sharing; "In general I think thirty dollars for a brand new CD is a fair bit of money and not something that I would pay for" (Angus). But not all CDs costs $30 in Australia, with retail chains like JB Hifi selling CDs at lower prices than their competitors:

"*I have a sneaking suspicion too that because they're (CDs) $10, people will actually spend more. Like if you went to say JB Hifi (physical electronics store) and buy a DVD for $20, you buy one but if it's cheaper, people will spend $200… They say okay we're losing money because of this, so they put the price up when what they really should be doing is putting the price down and selling the volume as opposed to...*"(Daniel).

There appears to be a consensus that the high cost of CDs is a reason to file share illegally, "Lower the prices of CDs, definitely...higher than $30 is ridiculous, $10 an album? Then I probably will, even $15 and then maybe buying online wouldn't be such a bad thing but then I'm not a credit card person either so...that's a deterrent" (Cassandra); "I think the prices for music is to high. I mean, sure the artists need to be paid for their work, I don't want to rip them off at all, which is why I buy CDs and songs online occasionally" (Richard). Others feel strongly that the price of CDs should be reduced after being on the market for some time, "why is it after a period of time

that movies are significantly cheaper, you know nine ninety nine or eleven ninety nine. So I think after a year a CD has been on the market I can't see why it can't be down to nine ninety nine, ten dollars" (Sid).

Even some musicians think that CDs are much too expensive, as Daniel (a musician and a student) pointed out, "chart stuff is way too expensive and even independent import stuff like I was looking at getting The Shins and it's an import from I don't know where, Europe or something and it's forty dollars for one CD. I think it only had six or eight songs on it. Sometimes you weigh it up. If someone can loan me a copy and I can have a listen of it and give it back, I'd do that instead. It depends on what the CD is. But the majority are overpriced" (Daniel). Others had similar experiences with imported CDs, "If it's really expensive then I just find another way to get it" (Katie).

However the music recording industry is not convinced that cost is a valid motivator for unauthorised file sharing, "people say 'well its all just so expensive' and you go 'so how much do you pay for a cup of coffee?' '$3.50 in Sydney? Say that's 10 minutes enjoyment. You pay $1.69 for a track and you've got it forever. You can listen to it forever. So are you telling me that $1.69 is too expensive?' (Music Industry Piracy Investigations)

Costs – Commensurating the Price of Digital and Physical Music
Affordability is not the only issue, but some are not willing to pay for something they do not value (if they know it is cheaper to produce but the price is still the same as a physical product). Commensurability of the cost of digital tracks with the cost of a CD, with digital tracks from iTunes generally of a lesser quality to those accessed through unauthorised file sharing, "I can't justify paying for an MP3...if I pay for an MP3 I pay for something that's not at full quality for one and also they are usually not, I have had a look and they are like two dollars a song and I think, two dollars a song at ten songs is twenty dollars...considering they are about the same price...I would rather just buy the CD" (Eugene). Digital music generally does not come with other aspects of the physical artifact such as the lyrics and cover art, which some consumers value, "to encourage it (purchases), well lower prices for one, because you are not actually paying for a physical product there is no cost in the manufacture of the case or the booklet so there's no way that it should be anywhere near the same amount as the physical product" (Eugene). Some argue that the price of digital music should better reflect the quality, rather than competing on the same level, "that's absurd, when it is really about $1.29 for a song on a CD, because if you do the maths, you've got an MP3, that's compressed to like a one to ten ratio, so you should paying one tenth of the price" (Eugene).

Considering that there is more demand for the entertainment dollar than ever before, free music appears to be increasingly difficult to turn down for those not particularly interested in quality (accessing through public unauthorised file sharing). As students are limited in their disposable income, unauthorised file sharing becomes a viable option to access their music "Well definitely it's an income thing. Right now being a student, and I've got children and they take all my money. I've got three and it's just so expensive. So usually I don't have any money. So when I think they're a bit older and I've got 'me money', CDs will be a number one priority, probably over most other things. I can go CD shopping again" (Cassandra).

Costs – Payments to musicians for digital music
There is a perception among consumers that much of the revenue of physical and digital music does not go to the musicians (usually less than 10% is reserved for musicians). With a view that record labels generally exploit musicians, there is little motivation for some to pay for music, "given there are two services, one has costs, one doesn't, and you want people to feel morally impelled to pay for it. If they don't think money is going to artists then why on earth would they pay? If they think the money is going to some faceless US corporation why on earth would they pay?" (IP Lawyer) One research subject considers an analogy of musicians to shoes produced for minimum wage for a multinational corporation; "the world was in outrage when Nike shoes when found to be exploiting kids for 2c an hour pay rates. Think of 40c an album for artists?" (Rusty)

Some consumers argue that their payment to music from stores like iTunes and from CD purchases does reach the musicians, motivating them to file share illegally, "when you pay thirty five dollars for an album and they are only getting one or two dollars it seems hardly worth it" (Gates). Others agree, "Holy moly, (you) sold 6000 CDs [sold] there is much rejoicing, but the label keeps $9 per CD and gives the band 65c per CD sold" (Rusty).

Even in online music stores such as iTunes, some feel disillusionioned with the legal system for purchasing music "the fundamental thing that is missing from the legal services is any connection on the part of individuals using, any belief, in a connection between them buying legally and the money going to artists, that is the single biggest problem I believe" (Intellectual Property Lawyer). The industry dismisses the understanding that a minority of the revenues go to the musicians and believes unauthorised file sharers should feel guilty about their actions which they argue are ripping off musicians, "the majority of file sharers feel bad that the artists' and the songwriters aren't getting any money but that doesn't translate into the action of 'oh I am not going to file share today'". The industry appears disappointed that "they still do it anyway" (Music Industry Piracy Investigations).

Cost, coupled with lack of choice can be a motivator for unauthorised file sharing, "the genre of music that I listen to typically (metal), the albums are always imported from Europe and they tend to be around thirty five dollars

and the way I seem to justify it is, say they have got five albums, I will buy two albums and download the rest and then when they come out to Australia I will go to their concert" (Gates).

Convenience in Accessing Online Music

Convenience in accessing online music refers to accessing when and how you want. Firstly, it is necessary to consider how consumers access their music in a contemporary setting in comparison to how music has been traditionally accessed in similar unconventional channels. It is interesting to consider how society now pirates music, is this new? Or has this behaviour and the associated values always existed? This research finds that this behaviour has not changed significantly with the introduction of the Internet; rather, the technology has just made it easier than ever before. It is argued that it is not necessarily more common now to copy music 'illegally', rather it easier with digital technologies.

Within the history of music, almost every research subject (music recording industry included) admitted to taping music from the radio in their youth, and making mixed tapes for friends and family. However with new technologies, have come what appear to be new rules to many as to what can be done with purchased media, "It's interesting to compare to the history of vinyl records and CDs in that once you buy a CD or a record you can play it as many times as you want on as many different pieces of equipment as you like and people traditionally, although the copyright law was probably there but it was certainly never policed. You could copy it onto a tape, or rip it onto your computer or whatever and you could even pass on the CD to your friends for nothing or resell it. In comparison, very very free and open use once you purchased the CD and it was yours and once you purchased it that was it" (Media).

Those in the industry argue that this culture of copying and sharing is a generational activity "when I was 14 did I think I was ripping someone off? Probably not. I would probably feel that in the way kids do today so maybe it's not a generation thing maybe it's just an age thing. But then I guess was I taping stuff at 25 no. So that could be a technology thing" (Universal Music). This ease technology provides to copy music however helps to find desired music with little effort, "If I can't find what I'm looking for on Mininova then just go to Google, punch it in in quotation marks so it knows the exact phase, and it will find some site in Germany or Czechoslovakia or whatever" (Alex). Some value unauthorised file sharing over online music stores because of the system's ease of use, "it's actually a lot easier than buying them legally" (Jason).

Essentially music consumers feel they should be able to use their purchased digital content when and where they want, "I love listening to music. It's very important for me to have access to that music when I want and where I want and that's not only my desire but I think a reflection of the consumer society that we live in, people want to have that convenience and if they own an audio track on one media then I think the people should have the right to convert that audio to a different media and be able to take it with them" (Angus).

Convenience in Payment for Online Music

Payment options can hinder the convenience of online music stores. Credit cards pose an obvious barrier for younger consumers, while pre-paid cards can be inconvenient and troublesome. Some argue that micropayments directly to the musician could overcome ideological barriers to paying for music, while options such as the convenience of payments through PayPal would provide incentives for others to purchase their music online instead of unauthorised file sharing.

Convenience of payment is considered a barrier to purchasing online music; particularly the use of a credit card for payment is difficult for younger users "they don't have credit cards so how are they going to buy at iTunes? Well iTunes has some cards but then maybe they're going to wait for their mum to buy it" (Universal Music). In most supermarkets and music stores, consumers can purchase an iTunes prepaid music card, however these are not without their limitations, "I walked out of the supermarket without getting the number and they tried to call me back, she didn't write it down, I'm like oh 'thanks'" (Brad). Others would like to see commercial systems implement systems for micropayments, "I can't remember the last time that I actually paid for music. If I could make micro payments directly to the artist who was responsible for generating that content then I would, but I don't want to pay an intermediary, I don't want to pay the publishers and the record studios...if I could make a micro payment of thirty, forty, fifty cents directly to the artist I would" (Angus).

Choice in Available Music

Choice refers to consumers being able to access the music they want, in a format that they want. There is evidence that there is still value in the physical artifact – the CD. The cover art and lyrics are important to some, and iTunes have recently attempted to build this physicality into their online music offerings with the 'iTunes LP' feature. However there is also value in the ability to search online for music using a pull strategy (Voida et al., 2006), with some using a simple Google search (now improved with the newly introduced Music Search) to find authorised and unauthorised music. This strategy also enables browsing of connected peer's music libraries on their PCs when using public unauthorised file sharing applications like LimeWire, a feature valued by some.

Physical stores seem to have less music available to purchase than they used to, with a focus on the 'hits' and what is popular at a particular point in time. Online store like iTunes have more choice than their physical counterparts, however it is still a limited and restricted catalogue particularly in Australia (as compared with the US and Europe). An example of this is the American Idol television show that aired in 2008 with an Australian citizen in the top 10 finals. His music was available to download for a price in the US, however it was not available to purchase from any source in Australia, frustrating some viewers. So with that choice comes an appreciation of added value; consumers are willing to pay if they are offered something they cannot get elsewhere; i.e. that they cannot get for free. Without the ability to purchase desired content in either a physical or digital form, a scarcity exists which is a valid motivation for unauthorised file sharing.

Music consumers value being able to access whatever music they want, when they want, "I use a set of specific websites to search for music, Mininova, Isohunt and Pirate Bay, they are torrent search engines and generally I find any music that I want to get a copy of through those torrent sites, and I will just go there and search for it and find the link for it and download it and listen to it" (Angus): "This one is pretty fast and you can pretty much get everything you want and you're kind of guaranteed to get what you want" (Richard). Others just use Google to find their music, "I used to just do Google searches for MP3's but it's a bit hit and miss" (Brad).

Choice in Music – Push vs. Pull Technology
Using public unauthorised file sharing systems while being *pull* technology, rely on searches to find content, "it's got a little search box" (Brad), which is usually used to search for single tracks. Such systems also provide the added benefit of being able to browse the shared folders of others connected to the network, "you can browse the host computer of who you're downloading from, and you'll know that if they have a certain song that you're downloading they might have other similar music tastes so you just browse their folder of what they allow you to access and you'll see, you go ok well yeah they've got some good stuff there too...you can hook up with similar people with similar music tastes" (Bill).

Some are able to find whatever they want on public unauthorised file sharing sites, "I haven't found any audio tracks that I can't get without getting charged, so I haven't had cause to use any paid services to purchase music online" (Angus). Others have had difficulty in finding local Australian music through unauthorised public sources, "I find a lot of the stuff I want to download isn't on LimeWire anyway, especially a lot of the independent Australian stuff. So I've kind of given up on it" (Katie).

Choice in Music - Providing Value for Consumers
Some musicians are finding new ways to provide value for their fans, while still competing with free. In reference to the recent Radiohead online marketing scheme of their *In Rainbows* album (pay us what you think its worth or download for free), the additional value of providing the cover art was important, "they gave you all the cover art, the cover art very important, they give you all these sorts of details and you can either download it or pay for it or whatever you want to. Now I'm not into them so I didn't purchase it but if it was a band that I was interested in then I would have" (Gates).

Scarcity in certain genres can encourage individuals to go 'underground', "Every genre, every remix, everything that a DJ has ever done almost including like live recordings, and that sort of thing, I don't even know where to start out, there is so much that I can..." (Jason)

DISCUSSION – MOTIVATIONS FOR UNAUTHORISED FILE SHARING
Three main themes emerged on the cost, convenience and choice as motivators for unauthorised file sharing. This study extends previous research by clearly identifying three main motivators which guide decisions about where and how to access online music. These motivators are discussed here from the perspective of the research subjects, and the way they influence decision making when unauthorised file sharing.

- *Cost* - the price of physical mediums such as CDs are argued to be much too expensive, as is the digital music available online ($1.69-$2.19/track from iTunes). The retail price of a digital single track is equal to the comparable cost of a track on a CD, however the two are not commensurable as there are no costs for packaging, and few costs for distribution and storage of the digital artifact.
- *Convenience* - systems supporting the sharing of unauthorised content are said to be easier to use than online stores like iTunes, and they provide less barriers to the music transaction, such as the need for a credit card. Interoperability is also important, and technical competence influences the choice of unauthorised file sharing system.
- *Choice* – the research subjects in this study are frustrated that the largest online music store (iTunes) is limited with no access to artists such as the Beatles or AC/DC etc. whereas sources that provide access to unauthorised content enable unlimited access to almost any digitally recorded music, often at a very high quality. If they cannot find a legitimate source to purchase, they look for other sources.

Cost

The *cost* of digital music available through online stores appears to be out of line with the costs of physical music and consumers have noticed this and use this partly as a basis for deciding how to access their music. Much music bought in online stores is compressed up to one tenth of the original file (MP3), and it is argued by some consumers in this study that the price of digital music should be one tenth of the price. Many are aware of this disparity and feel that digital music as it currently is available in MP3 and AAC format, is not worth paying for at $1.69 per track. This finding confirms Lessig's (2004) reason for using unauthorised file sharing networks, that "they would not have purchased because the transactions costs off the Net are too high.

It appears that many also feel that $30 for a CD is unreasonable, particularly when the cost does not decrease months/years after its release in the same way that DVDs do. Australian physical retail chains like JB-HIFI have argued in the media that for them CD sales have not decreased and that is due to their $10-$15 price tag per CD. The research subjects agree with this conclusion, with many saying that when they purchase CDs, they do so from JB-HIFI stores. These findings extend the work of Bagchi et al. (2006) who argue that individuals may feel that the injustices inflicted by the manufacturers justify piracy.

This study also finds that some unauthorised file sharers believe that the majority of the money they pay for music from physical or online stores does not go to musicians, so there is no need to pay as only the record labels are missing out (and they have enough money anyway in their opinion). The arguments by the music recording industry that people working in the industry are losing their jobs because of unauthorised file sharing are usually not taken seriously by these file sharers. Lacking a connection between musicians and their fans in the online stores, consumers do not feel obliged to pay. Therefore it is argued that the work by Sarri (2006) has value in understanding how to monetise emotional loyalty between fans and musicians.

Convenience

The *convenience* of using unauthorised file sharing systems is illustrated by the view that it takes 'less clicks' than using stores like iTunes (Alderman, 2001), which the research subjects generally agreed with. Of course there is some level of technical competence required to use unauthorised file sharing systems, particularly underground music file sharing communities, but an individual's level of technical competence can fit with the differing file sharing options available. For example, it is argued that those least technically competent tend to use either iTunes or LimeWire, whereas those with medium skills often use public torrent sites, and those with higher tech skills often participate in underground music file sharing communities.

Convenience in paying for digital downloads is a challenge for those without a credit card, however even the most technical competent (and credit card ready) consumers sometimes do not feel comfortable with online transactions due to the regularly reported privacy and security breaches from the United States (where the iTunes head office is located). However there are suggestions to implement a type of micropayment option, or remove the payment option all together and make it part of the service (e.g. part of the Internet bill, or paid for by advertisers).

This study extends ideas proposed by Smith and Telang (2009) who suggest that giving away content in one channel can stimulate sales in other channels. They argue that free and paid appeal to different markets. This study shows how file sharing is a convenient way to access music almost immediately and on a daily basis. File sharing is often used as a 'sampling' device – complimented by hard copy (CD) purchases when convenient. This study extends the work by Gran and Molde (2009), proposing file sharers are ten times more likely to purchase music. They argue those who often substitute file sharing for purchases would not have purchased anyway.

Convergence is another issue related to *convenience*; the research subjects generally want one device for their phone and music and even Internet. Issues of licensing and a need to primarily consider which device to buy, rather than which music to buy, results in dissatisfaction with the options available. Interoperability is also a concern as it is necessary for the new device purchase to fit with the technology that the consumer already has.

Choice

In terms of *choice* online, stores like iTunes are unattractive to some consumers due to their limitations on what music is available. Due to licensing restrictions, such stores are currently limited in what they offer. The analysis in this study leads to the conclusion that in order to encourage consumers to pay for their music, they must be able to access the music they want, in the format they want, and use it how they want (with no restrictions). It is argued that the economic ideologies proposed in the concept of the long tail (Anderson, 2006) are relevant here; that selling a large number of unique items, each in relatively small quantities results in ongoing revenues. It is argued that there is value in making all digital music content available via online stores, else consumers will go elsewhere to find it. This finding confirms Lessig's (2004) categorisation of four primary reasons to file share.

If individuals cannot find a legitimate source, then they are likely to find another (possibly unauthorised) source for their desired music. If online music stores are to compete with the free systems of file sharing, they need to provide something of value which is not readily available for free, and the first part of this is to provide a much wider choice of content than is currently available. Lessig (2004) argues that it is only when unauthorised file

sharing is used as a substitute for purchases that it is harmful to the industry.

In discussing *choice*, one of the benefits of unauthorised file sharing systems is the unpredictability in the content available. Much like the unpredictability that the 'single' has bought about in MP3 music listening when using the shuffle function, much of the new content made available to download in underground music file sharing communities is unexpected and appears somewhat randomly Music is made available when a member decides they would like to share it with the community (they may have recently gained a copy), or when a request is made for specific content. As such, new content is available for download in a somewhat unpredictable way, which encourages members to return to the community and participate on a regular basis.

The second part of the choice finding relates to file formats, which also is connected to the finding of convenience. Online music stores provide music in a specific format e.g. iTunes music is in their proprietary AAC (Advanced Audio Coding) format. Such formats allow for restrictions such as digital rights management to be built in, and these formats are often not compatible with different operating systems (such as Linux) and different devices (such as mobile phones). This lack of technology fit concerns particularly the more technology savvy consumer who has an understanding that they may not be able to play certain content because of the way it is formatted and distributed. Consumers find this frustrating and search for ways to avoid purchasing such music in this format. In a very different way, underground file sharing communities (both public and private) usually enable access to music in the widely used and open format of MP3. However in underground communities there is a desire for music in the higher lossless open format of FLAC, which plays on any platform or device, and is of a much better (technical) quality than MP3. In Australia, it is very difficult to locate mainstream or genre specific music to purchase online in FLAC format therefore giving consumers another reason to file share to access their desired music. This situation is described as 'scarcity'.

Scarcity in Accessing Music

Lessig (2004:37) argues that people use unauthorised file sharing networks for four primary reasons (as discussed earlier), one of these reasons fits with the concept of scarcity proposed here: "To get access to copyrighted content that is no longer sold or that they would not have purchased because the transaction costs off the Net are too high (C)". He argues that sharing motivated by scarcity is "illegal, yet good for society (since more exposure to music is good) and harmless to the artist (since the work is not otherwise available)".

Continuing on from the discussion about *choice* in the previous section, when consumers cannot find music they want either through stores like iTunes or via physical stores, they often turn to unauthorised file sharing to find the desired content. Even those staunchly against u admitted to turning to file sharing to get access when paid options were not available. The high cost of physical CD imports from overseas ($50-$60) also results in unauthorised file sharing, as local copies at reasonable prices are unavailable.

This study argues that scarcity is particularly relevant when considering specific genres of music e.g. heavy metal. Most physical stores only provide access to 'hits' in the mainstream pop music, and many online stores follow similarly. Even those that have quite extensive catalogues like iTunes, still have limitations when it comes to specific genres. It is possible that entire communities related to specific genres need to be created to meet this niche, in a similar way to Beatport.com for electronic music. Pfahl (2001) argues that such communities are a way of creating new revenue streams.

CONCLUSION

Those engaging in unauthorised may have a negative perception of capitalist approaches to distributing online music (evidenced by their association with file sharing ideologies). This negative perception is often motivated by a rejection of the power wielded by mainstream record labels, and by the high perceived monetary cost in purchasing digital music with a view that such digital content is not of an equivalent quality to the physical artifact (for much the same price).

Critical research views capitalism as dysfunctional and in need of revision and rethinking (Stahl and Brooke, 2008). Unauthorised file sharing has become a norm for many consumers, and those who participate in it may be viewed as having disdain for the mainstream approach to distributing music (they are part of a deviant subculture). As such, and even without taking an anti-capitalist view, unauthorised file sharing can be considered a 'class struggle' with those purporting an alternative ideology in a situation where the current social arrangements are not in their 'best interest'. One exemplary example of this is the legal cases against consumers for unauthorised file sharing, with a goal of using downloaded music for personal use (Bhattacharjee et al., 2006) which was declared legal in Portugal in September 2012. This study attempts to gain an understanding of such consumers who file share for personal use, with a view to emancipating those same consumers through considering their motivations for unauthorised file sharing. In line with the philosophy of critical ethnographic research, this study provides a rich description of unauthorised file sharing, giving ideas to improve the nature of capitalist distribution of online music so as to rearrange the power structures to be fairer for all involved.

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