



MEDIA@LSE
Department of **Media** and **Communications**

MEDIA@LSE Electronic MSc Dissertation Series

Compiled by Dr. Bart Cammaerts and Dr. Nick Anstead

Why pay if it's free?

Streaming, downloading, and digital music consumption
in the “iTunes era”

Theodore Giletti,
MSc in Media & Communications

Other dissertations of the series are available online here:
<http://www.lse.ac.uk/collections/media@lse/mediaWorkingPapers/>

**Dissertation submitted to the Department of Media and Communications,
London School of Economics and Political Science, August 2011, in partial
fulfilment of the requirements for the MSc in Media & Communications.
Supervised by Dr. Bingchun Meng.**

Published by Media@LSE, London School of Economics and Political Science ("LSE"),
Houghton Street, London WC2A 2AE. The LSE is a School of the University of London. It is
a Charity and is incorporated in England as a company limited by guarantee under the
Companies Act (Reg number 70527).

Copyright in editorial matter, LSE © 2012

Copyright, Theodore Giletti © 2012.
The authors have asserted their moral rights.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval
system or transmitted in any form or by any means without the prior permission in writing of
the publisher nor be issued to the public or circulated in any form of binding or cover other
than that in which it is published. In the interests of providing a free flow of debate, views
expressed in this dissertation are not necessarily those of the compilers or the LSE.

Why pay if it's free?

Streaming, downloading, and digital music consumption in the "iTunes era"

Theodore Giletti

ABSTRACT

This research study is an investigation into the consumption of digital music. Rapid growth in the market for digital music has been led by the rise in popularity of online download stores such as iTunes and streaming services. Consumers now have the option to acquire songs from a variety of paid and non-paid legitimate sources, as well as through unlawful channels. At the same time, rights holders have attempted to re-commodify a product that has been de-commodified through copyright infringement. Drawing from the theory of planned behavior, this study places emphasis on the role of norms and attitudes in the formation of intentions to either purchase music or download it for free. It will be shown that these preferences affect the treatment of digital music as a cultural object. A political economy framework is used to understand negative attitudes towards attempts to control digital music distribution. An online questionnaire was designed and completed by a total of ($n = 162$) consumers. The data was analyzed using a mixed-method approach in order to triangulate quantitative results. The results indicate that a large portion of consumers are willing to pay for digital music. However, they are not encouraged by the threat of legal repercussions. Despite being satisfied with the streaming service, users are not willing to subscribe. The youngest consumers hold favorable attitudes towards illegal downloading which is grounded in a norm of copyright infringement and belief in the Internet as free. Finally, it was found that affinity for the recording artist serves to moderate intentions to download illegally. Overall, the results have implications for measures to counter digital piracy and to encourage willingness to pay. Furthermore, they question the long-term viability of the subscription-revenue streaming business model.

INTRODUCTION

As the MP3 continues to replace the compact disc (CD) as the preferred format, demand for digital music has grown tremendously. In 2010, the market for digital music accounted for approximately 47% of total US music shipments, up from just 9% in 2005 (Friedlander, 2010). Consumers have access to an array of download stores, music streaming services, and Internet radio websites. Music streaming services in particular have attracted considerable attention. In Sweden, two of the world's largest record labels generate more revenue from Spotify, than they do from any other source (Lindvall, 2011). These trends are not confined to European or American music markets. Baidu, China's largest online search company, recently signed a deal with rights holders to license music on its website for both free download and streaming (Hille, 2011). The surge in popularity has led some to believe that the digital music market represents the recording industry's next sustainable business model, along with diversification into live events and merchandise. However, relatively little is understood about the consumer who uses a combination of legal and illegal sources to acquire music *a la carte*.

In the decade prior to the Internet, the music industry was relatively healthy overall with worldwide sales peaking in 1998 (Baym, 2010). Since then, peer-to-peer (P2P) networks such as Napster have contributed to the decline in sales of CDs. There is some disagreement about the extent to which file sharing has negatively impacted the recording; however, evidence points to copyright infringement as a significant factor. The digitalization of music effectively removed the industry's monopoly on high-quality reproduction so that illegal copies were of equal standard to the original (May, 2007). Concomitantly, the intangible nature of digital music has resulted in new consumption practices. Efforts to counter digital piracy have primarily used legal mechanisms to dismantle P2P networks and prosecute file sharers. More recent measures include educational and awareness campaigns. Nonetheless, the dismantling of Limewire in 2010 marked the demise of P2P networks and emergence of new sources of pirated content (BPI, 2010).

With the abundance of digital music outlets, new questions are raised about the impact of piracy on the willingness to pay for music in a digital format and the willingness to subscribe to a streaming music service. This study conducts a detailed examination into the attitudes of consumers and social norms which influence intentions to purchase digital music or to download it for free. It examines perceptions towards the pricing of digital music, the extent to which consumers are willing to pay for a subscription streaming service, and whether legal repercussions have served to encourage consumption. Previous research has sought to

establish a direct link between P2P network usage and demand for CDs. This study employs a broader definition of illegal downloading to include new forms of copyright infringement. Secondly, it analyses attitudes and norms towards copyright infringement, to establish the underlying determinants for intentions to download music illegally. Finally, it considers the relationship between consumers' treatment of music as a cultural object and digital technologies.

Whilst the Internet is often cited as an example of a genuine gift economy, the "inescapable dynamic of tension" remains between abundance and scarcity in the market place (Mansell, 1999, p. 155). A political economic framework is used to understand attempts to re-commodify a good in the digital environment through expanded notions of copyright and digital rights management technologies. The implications for the consumer relative to the position of power of the record labels are also discussed.

The study aims to contribute to the understanding of the existence of a social norm of copyright infringement amongst the youngest consumers. It aims to establish why consumers would be willing to pay for digital music, and in doing so, provide insight into the sustainability of a subscription-revenue business model. In the shift to the digital age, one without physical artifacts, the analysis of consumption will become a strategic resource for those operating in the cultural industries (Molteni & Ordanini, 2003). Although the focus of analysis is on the music business, insights may be applied to other cultural industries that have experienced a transition to the digital environment (Molteni et al., 2003).

LITERATURE REVIEW

File Sharing and Music Sales

Firms operating in the music industry employ an unusual business model. The product supplied to the market is unique in that it is a purely symbolic good (Scott, 1999). Record companies aim to recoup investments in less profitable ventures by maximizing the return on an extraordinarily successful release. The inherently volatile and unpredictable nature of the industry renders it prone to concentration so that relatively smaller firms remain marginal (Bettig, 1996). Through repeated consolidation, the business has grown to become a global industry dominated by a small number of large corporations and with a number of small independents operating on the periphery (Scott, 1999). At the time of writing, the market is characterized by the 'big four' record labels of Universal Music Group, Warner Music Group, EMI, and Sony Music Entertainment. Owing to uncertain market conditions and a bungled private equity buyout, the landscape is prone to change as Citigroup has recently put EMI up for sale (Sweeney, 2011).

Digital technologies were at first beneficial. The invention of the CD created a boom as music collections were modernized from vinyl records (Baym, 2011). The most recent significant development was the creation of the MP3 digital audio encoding format by the Motion Picture Experts Group (MPEG) in 1993. By compressing data so that files are small and easily transferred, MP3 technology altered the way music is distributed and consumed. Although the industry has a history of change associated with the introduction of new formats, the MP3 was exceptional. Through P2P networks such as Napster, individuals could download files directly from each other's computer, thus making the "core scarce good of recorded music infinitely replicable" (Baym, 2010, p. 177). Digital media consequently transformed not only the cultural object, but also empowered the consumer relative to the music industry (Poster, 2010). Streaming technology constitutes the latest development in the distribution of music. The technology uses buffered play, rather than downloading an MP3 direct to the computer's hard drive (Fox, 2005). Therefore, the consumer is able to listen to music, but does not retain possession of it. Although still in development, cloud-based music services are digital lockers that store content for individuals to access from any device. The impact of these services for rights holders and consumers remains to be seen.

Illegal file sharing is often cited as the cause of decline in the industry's traditional revenues sourced from CD sales. It is difficult to prove direct causation between the two; however, a number of studies have made forays into the phenomenon. Hui and Png (2003) conducted

one of the earliest econometric studies into the relationship between piracy and demand for music. Their examination of sales data over the 1994-1998 period showed that demand for CDs decreased with piracy. The study contributes to the understanding of the trade-off between positive demand-side externalities and the negative effects of piracy, but is of limited use today since it does not address digital piracy.

Lessig (2004) provided an alternative explanation, arguing that sales decline is partly attributable to the overall number of CDs released. It is correct that a decline in the number of albums released has occurred. However, Lessig fails to fully consider that the decline is explained by lower demand for the good and subsequent lower revenue available for investment in future releases (Liebowitz, 2005).

Other than this oversight, Lessig (2004) contributes a valuable framework for the analysis of different segments of P2P network users. Firstly, a minority use file sharing as a convenient way to exchange legitimate content. Secondly, the network also provides a means to acquire copyrighted material that would otherwise not have been purchased and would not have gained any recognition. Thirdly, Lessig (2004) outlined a group that samples music before purchasing it. Finally, individuals substitute purchasing music for files acquired over P2P networks or downloading in general.

In practice, it is likely that first group is extremely small given that almost all content shared on P2P networks is pirated. The second group has the potential to spread the reputation of an unknown artist, but would nevertheless infringe copyright law. The third group is one of the most controversial and is often cited as a benefit of P2P networks. Indeed, sampling constituted Napster's (unsuccessful) defense under the principle of fair use against A&M Records Inc. (Landau, 2002). On one hand, file sharing has the potential to increase the aggregate quantity of music purchased. Peitz and Waelbroeck (2006) put forward the most convincing argument in favor of sampling. By matching buyers' preferences with products, P2P networks result in purchases that compensate for any negative effects of copyright infringement. One question the authors fail to address is whether this result holds true for all record labels, regardless of size. It is more likely that sampling would only benefit small independent labels whose artists have little previous name recognition. An article by Blackburn (2004) concluded that file sharing reduces sales for well-known artists relative to unknown artists. From the perspective of the largest labels, sampling constitutes a weak argument in favor of P2P networks due to the sheer quantity and scope of copyright infringement committed. Indeed, Montoro-Pons and Cuadrado-Garcia (2006) found no evidence of a positive effect of piracy on demand for music.

The final group is the focus of analysis for this study because their behavior has the greatest impact on sales of digital music. Many scholars have reached the conclusion that copyright infringement has had a negative effect on the purchase of music (Rob & Waldfogel, 2006; Zentner, 2006; Liebowitz, 2008; Waldfogel; 2009). In contrast, a study put forward by Oberholzer-Gee and Strumpf (2007) is most widely cited for reaching the opposite verdict. Despite its merits however, the study suffers from a number of flaws that raise questions about the conclusions made. Specifically, Liebowitz (2007) made a powerful critique of Oberholzer-Gee and Strumpf's (2007) analysis, highlighting a number of serious inconsistencies in the methodology and representation of findings.

The majority of overall research has sought to establish a relationship between piracy and demand for music in a physical format. To date, Waldfogel (2009) conducted one of the few studies on the relationship between digital piracy on the demand for digital music. P2P file sharing networks are no longer as popular as they once were. Recent evidence points to file hosting websites as an increasingly popular source of digital music and other pirated content. Thus, this study employs a more comprehensive definition of illegal downloading in an attempt to contribute to the understanding of the relationship between digital piracy and demand for digital music.

Copyright in the Digital Age

Copyright protection is highly important to the music industry and to the creative industries as a whole. An understanding of the basic workings of copyright is necessary to comprehend the impact of illegal downloading on the record label and the expansion of intellectual property rights for the consumer.

Intellectual property establishes proprietary rights over original forms of intellectual production or “intangibles” and gives the holder the right to exploit the work through licensing its copying in return for compensation (Yar, 2005). The mechanism allows the record label to produce an artist's work and sell it for a profit. The MP3 can be taken as an “inherently political” technology through the embodiment of power in copyrights, as the format is objectified as an article of intellectual property (Sterne, 2006, p. 830). The rise in popularity of P2P networks meant that copyright infringement occurred on a massive scale through unauthorized copying and distribution of the work (Yar, 2005). Digital piracy poses a serious challenge to the industry's business model that fundamentally depends on a cycle of per-unit pricing and copyright law enforcement (Leyshon, Webb, French, Thrift, & Crewe, 2005).

Record labels and stakeholders have collectively pursued a variety of protective, educational, and repressive measures in an effort to stem the flow of digital piracy (Cammaerts, 2011a). In the United States, the music industry is represented by powerful actors such as the Recording Industry Association of America (RIAA) which sued Napster in 1999 for copyright infringement. Litigation has also been brought against individual users of file sharing networks, resulting sometimes in excessive penalties due to the nature of copyright law (Barker, 2005). These measures in tandem have curbed digital piracy to a degree. A study by Bhattacharjee, Lertwachara, Gopal, & Marsden (2006) found that legal threats from the RIAA discouraged participation in file-sharing networks, but that prevalence of music files on these networks largely remain. More recently, the 2010 Digital Economy Act effectively mandates UK Internet Service Providers to take a greater role in tackling copyright infringement (Cammaerts & Meng, 2011).

Developments in intellectual property rights have taken place over time, but could also be considered a reactionary measure by the creative industries in response to the threat posed by piracy. Under pressure from the recording industry, Congress passed The Copyright Term Extension Act (known as the Sonny Bono Term Extension Act) in 1998, which extended copyright protection for an extra 20 years (McCourt & Burkart, 2003). On a global scale, the US government has worked to extend copyright interests. For instance, the 1994 TRIPS Agreement obliges WTO members to abide by a set of intellectual property standards giving maximum protection to rights holders (Yar, 2005). The Digital Millennium Copyright Act (DMCA) implemented in 1998 is the most widely disputed of such legislation. Controversy surrounds the act's curtailment of the 'fair use' provisions of the 1976 Federal Copyright Act. Through the prohibition of circumvention, the DCMA affects the very use of technologies (Gillespie, 2004). By shifting the focus of regulation from "use of the work" to regulating "access", the act constitutes a "broad overreach that severely limits fair use rights" (Boucher, 2002, p. 96).

Nonetheless, the practice of rights management is not entirely unforeseen. For example, in 1992 the Audio Home Recording Act mandated the incorporation of technology to consumer CD and DAT recorders which prevented second-generation digital copies (McCourt, 2003). Rights management practices have also been applied to the distribution of digital music. Formed in 1998, the Secure Digital Music Initiative (SDMI) attempted to implement digital rights management technologies such as watermarking to bring a secure standard to music distribution on the Internet (Sylva, 2000). More widely recognized, the iTunes music store (launched 2003) used a proprietary digital rights management (DRM) system 'FairPlay' to

encrypt music files, until the format was exchanged in favor the MP3 in 2009 (George & Chandak, 2006). Now that music streaming services have been widely adopted, new questions are raised about technical and legal constraints placed on the consumers.

In many ways, the expanded notion of copyrights has lost sight of its original purpose. Rather than providing artists with incentives to create, its primary purpose is to generate revenue for the record label (Dolfsma, 2000). It remains to be seen whether consumers perceive this negatively and whether it ultimately affects intentions to purchase digital music. Piracy is as much a function of the boundaries of the law, as it is of the actual behavior committed. Overregulation which has occurred effectively incriminates a large part of the population (Lessig, 2004). Underlying the industry's response to piracy was an implied right to re-assert commercial copyright in a set of relations that were deregulated (Rojek, 2005). As such, the music industry could be perceived as attempting to appropriate the digital economy by "reintroducing commodification" (Terranova, 2000, p. 35).

Digital Piracy: Attitudes and Norms

As a relatively recent development, only a small body of research exists on the behavior of individuals who pirate digital content. Kwong, Yau, Lee, Sin, & Tse (2003) examined consumers' intentions to purchase pirated CDs. Their work demonstrated that the social cost of piracy, anti-big business attitude, and the individual's ethical framework played key roles. Contemporary explanations of the factors that underpin intentions to illegally download borrow from earlier studies on software and digital piracy. Digital audio and software are similar products since both possess some of the same characteristics as a public good, such as non-excludability and non-rivalry (Sandulli & Martin-Barbero, 2007). Gopal, Sanders, Bhattacharjee, Agrawal, and Wagner (2004) constructed a model based upon ethical determinants of software piracy, with an emphasis on deontological and consequential influences. Hsu and Shiue (2008) take a different approach altogether. Rather than focusing on intentions to pirate content, they measured whether attitudes towards intellectual property and perceived risk are drivers of a consumer's willingness to pay (WTP) for non-pirated software. Importantly, the results show that social norms had strong positive influences on WTP, whereas prosecution risk did not (Hsu & Shiue, 2007). Furthermore Chiang and Assane (2009) find that income, risk perception, and ethics influence WTP for digital music.

According to attitude functional theory, people hold motivations that serve to fulfill utilitarian, value-expressive, and ego-defensive functions (Katz, 1960). Kinnally, Lacayo,

McClung, and Sapolsky (2008) utilize the theory to assess motivations behind downloading behavior amongst college students. The majority of research however has applied the theory of planned behavior to examine intentions to download music illegally. Cronan and Al-Rafee (2008) showed that attitudes towards intellectual property, perceived risk, and previous behavior, influence intention to pirate digital content. Wang, Chen, Yang, and Farn (2009) combine the theory of planned behavior with social identity theory. The results suggest that intentions to download pirated music do not have a significant impact on the intention to purchase music in a physical format. Furthermore, the study highlights the significance of idolatry as a moderating influence. Wang & McClung (2010) employ a combination of three theories to provide a more detailed understanding of the attitudinal and normative factors of individuals who download pirated movies and software. The study finds that both multiple motivations and normative considerations are influences, in contrast to previous research that focused solely on utilitarian motivations. Finally, Bellemare & Holmberg (2010) find that the subjective probability of legal threats and morality were significant determinants of illegal downloading.

Comparatively little is understood about the role of subjective norms on intentions to pirate digital content and willingness to pay for non-pirated music. File sharing is widespread with a significant proportion of Americans having used the technology (Lessig, 2004). An argument can be made that individuals do not perceive the act to be illegal because a norm has emerged through repeated practice across the population, such as with cannabis use (Rojek, 2005). In this way, individuals may recognize illegal file sharing as a theft but would not consider it a crime (Balestrino, 2008). Some 'pirates' even attain cult status, such as members of the Pirate Bay website which provides links to BitTorrent files.

Gift Giving and Consumption Practices

The aforementioned has focused predominately on the behavior of individuals who download pirated content. Studies that focus on intentions to upload material should also be considered. Becker and Clement (2006) focus on the motivations of users who upload copyrighted material and suggest that the act of gift giving could stem from altruism, reciprocity, or an obligation to the network itself. P2P networks function on the basis that individual users share their music collection. Building on classical theories of gift giving, Giesler (2006) claimed that Napster contained key characteristics of a gift giving system, including social distinctions, norms of reciprocity, and rituals and symbolisms. Most recently, Baym (2011) recasted file sharing from an illegal practice to one embedded in participatory culture, and in doing so, undermined the traditional distinction between the

producer and the audience. Although the theory of gift giving provides insight into non-market exchange, the theory is limited in certain respects. The interconnectedness of P2P networks is perhaps not as extensive as previously thought. A large proportion of users 'free ride' off of the files provided by a relatively small number of individuals. Furthermore, the explanatory power of participatory culture is challenged as piracy on the Internet shifts away from P2P networks to de-personalized means of sharing.

The gift system contributes an important concept to investigation of the consumption of digital music, whether through streaming services or downloading. The notion of the Internet as an example of gift system is paramount (Cenite, Wanzheng, Peiwen, & Chan, 2009). For example, the open source software movement is regarded as an example of a genuine culture of gift giving and as a counter to the hegemonic forces of production. Mansell (2004) rightfully cautions that further research is needed into the structure of power that underlies the movement, such as its elitist creators for instance. Indeed, neither open source nor Creative Commons licenses operate outside of the mechanisms of traditional copyright (Cammaerts, 2011). With the concept of the gift economy, this study will investigate the notion of intangibles as free and the notion of the Internet as free (Feldman & Nadler, 2006).

Leyshon et al. (2005) argues that the crisis facing the industry is the result of the emergence of a "quasi-gift economy of music" since the mid-1990s and broader cultural forces that have affected the role of music within society. Consumers arguably do not attach the same value to digital music as they do to the physical product (Styven, 2010). A small body of work focuses on the effects of the digitalization of music on consumption practices. McCourt (2005) argues that ownership of intangible music is intensified through desires for compacting, immediacy, and customization. Despite being intangible pieces of software, Sterne (2006) believes that individuals treat MP3s as cultural artifacts. This has lead some to argue that new pleasures emerge in obtaining access and consolidating a database of music files (Burkart, 2008). Recent research finds that young people may derive satisfaction from the process of accessing and organizing a large music collection (Kibby, 2009). Finally, descriptive norms on P2P networks can explain excessive consumption behaviors that result in the hoarding of pirated music (LaRose and Kim, 2007).

Conceptual Framework and Research Objectives

At an overarching level, this paper investigates the extent to which scarcity is reproduced in the distribution of digital music and the consequences for consumers. The political economy analysis situates the distribution and consumption of music within the context of capitalism

(Bettig, 1996). Political economic theory places an emphasis on power relations that would give insight into the position of the music consumer relative to the record label. Specifically, Leyshon's et al. (2005, p. 186) model of the 'networked economy' outlines the complex network of relationships between producers, distributors, and consumers and effectively demonstrates the power commanded by record companies.

The recent surge in popularity of music streaming services necessitates the need for inquiry into the technology, especially as it is taken to constitute the industry's latest business model. Although not directly referring to the recording industry, Mansell (1999) pertinently wrote that the dialectical relationship between scarcity and abundance present in capitalism is manifesting in new ways with the commercialization of the Internet. Music distributed online as a service rather than as a product, gives the intellectual property rights owner "distinct advantages" in comparison to the traditional relationship between buyer and seller (Burkart, 2008, p. 248). Despite frequent claims about the democratizing power of the Internet, inequality remains in the digital environment. An integration of an analysis of the structures of power with concern for symbolic form, would revitalize the political economy approach and allow for a better understanding of the dynamics of digital music distribution and consumption (Mansell, 2004).

The theory of planned behavior has substantial explanatory power in the investigation of intentions to perform certain behaviors. Prior research has demonstrated that the theory can be systematically applied to studying the underlying attitudes and norms of individuals who engage in digital piracy. According Ajzen (1991), intentions to perform behaviors of different kinds can be predicted from attitudes, subjective norms, and perceived behavioral control. Attitudes are determined by the individual's views towards an object, whilst social norms refer to perceived social pressures. This study will use the two concepts as an analytical framework for study of the consumption of digital music.

The first theme to be investigated surrounds the consumption of digital music from legitimate paid and non-paid sources. The objective is to analyze the relationship between attitudes of the consumer and intentions to purchase digital music, or to use a legal outlet such as a streaming service. Secondly, the paper seeks to determine whether consumers are willing to pay a subscription for a streaming service. Thirdly, this study seeks to establish the effectiveness of legal repercussions on willingness to pay in an attempt to analyze devices that have the potential to encourage consumption.

The second theme to be investigated pertains to norms and attitudes towards illegal downloading. The objective is to determine the prevalence of a norm of copyright infringement. In doing so, it aims to provide some explanation for the failure of the emergence of an anti-piracy norm amongst the younger generation of consumers. Secondly, the study investigates whether attitudes towards illegal downloading are influenced by prior experience of P2P networks. The broader objective is to investigate the conflict that arises between the construction of digital music as a gift and the construction of digital music as a product which must be commodified (Giesler, 2006).

The final objective is to establish how consumption habits and practices are influenced by the preference to download *a la carte* or to use streaming services.

The central research question to be investigated is:

To what extent are consumers' intentions to purchase, stream, or download music for free, influenced by attempts to create scarcity in the distribution of digital music?

Embedded is a subset of three questions which necessarily will be addressed:

- To what extent are consumers willing to pay for digital music?
- To what extent have legal repercussions been effective in encouraging file sharers to purchase digital music?
- To what extent are consumption practices shaped by digital music?

METHODOLOGY

Rationale for Research Design

Qualitative methods were initially considered. However, both interviews and focus groups were deemed inappropriate, as they would have taken a bottom-up approach to answering the research question. Through an inductive style, these techniques generate a detailed narrative about a social phenomenon and allow for the emergence of patterns and themes from empirical observation (Creswell, 2009). Instead, an inductive approach is better suited to investigating the research question. Given that previous work on digital music consumption and piracy exists, theories may be developed and applied from the top down.

A quantitative approach would allow for the analysis of the relationship between attitudes towards price, illegal downloading, and willingness to pay for digital music. In particular, surveys provide a tool to systematically collect data from a sample representative of the target population. Inferences can be then made about the wider population of digital music consumers, after statistical analysis.

Whilst both qualitative and quantitative approaches have respective advantages and limitations, a mixed method approach can provide a comprehensive analysis to the research question (Creswell, 2009). Some of the attitudes measured by this study are complex and require an in-depth explanation. Therefore, concurrent triangulation was used to qualify quantitative data gathered from an online questionnaire with qualitative quotes from three optional open-ended questions included in the survey.

Technological advances have rendered the web-based approach a reliable and accurate research tool. Specifically, online surveys have constituted one of the most significant recent developments in survey methodology (Dillman, 2007). The web survey is a highly attractive method given its numerous advantages over its physical counterpart and other web-based approaches. The primary benefit results from lowered financial costs -- printing and distributing a twenty-item questionnaire to over 150 participants would have been both time and economically inefficient. Moreover, the web-survey allowed for the collection of a highly representative sample in a short space of time.

The ability to reduce social desirability bias was a pivotal factor in the decision to choose an online questionnaire over structured interviews and interviewer-administered surveys. Social desirability bias occurs when respondents under-report activities that are sensitive to

them (Bryman, 2008). In recent years, rights holders have conducted a highly publicized campaign against individual file sharers and copyright infringement. Respondents were likely to be aware of the legal implications of their behavior. In a face-to-face method, participants would have been constrained and would not have expressed their true attitudes and consumption practices. Participants would also feel under pressure in a peer setting such as a focus group. The resulting error would substantially limit the quality of findings.

On balance, the web survey was chosen because it offered the participant an unparalleled degree of anonymity and convenience. Recent evidence points to growing disillusionment and increasing selectiveness amongst the population (Duffy & Smith, 2005). Participants in the digital age would be more inclined to a survey online at their convenience and one which would allow them to do so in the privacy of their own home.

Sampling

Convenience sampling was used to gather empirical data about consumers of digital music. The non-probability method allows participants to self-select into the sample. Consequently, it is not possible to determine whether a respondent has been selected at random. Findings should therefore be applied with caution to the wider population (Davies, 2007). Nonetheless, the target population of music consumers are users of the Internet naturally. Coverage error associated with Internet penetration does not apply, and meaningful inferences can be made. Under ideal circumstances, the sample should be recruited through probability-based methods such as a pre-recruited panel of respondents or through an intercept survey where every n^{th} visitor to a website is approached (Couper, 2000). For the purposes of this investigation, the construction of a probability sample would have required substantial resources. Related studies have also shown that convenience samples can be used effectively.

The questionnaire was administered using SurveyMonkey, a survey website popular amongst researchers and with some degree of familiarity amongst the public. Settings were adjusted to allow the survey to be completed only once by each respondent. An invitation to the online questionnaire was sent to individuals via the social networking website Facebook. This was considered a better option than simply e-mailing the survey to respondents, as the sample size could be increased through sharing of the link to the questionnaire between individuals. In addition, an invitation was posted to the LSE internal teaching resource website "Moodle". After a one-week period, a second round of solicitations was sent out. The questionnaire was

closed to new respondents after a two-week period. In total, ($N = 166$) participants attempted the questionnaire.

Questionnaire Design

The final survey instrument is the product of a pilot study administered to fifteen individuals in the weeks before. Participants wrote that the pilot took somewhere between three to five minutes to complete. This was optimal as respondents to online surveys are especially time-sensitive and likely to start dropping-out near the ten-minute mark. Responses to an “other” option highlighted popular sources of digital music that had not been considered. These were included as a response option in the final survey, such as the “YouTube MP3 converter”.

The survey instrument was designed to gather empirical data that could test hypotheses consistent with the research question. An extensive review of related literature revealed important themes regarding willingness to pay for digital music and intentions to download illegally. These include perceptions of price, perceptions of risk, attitudes towards illegal downloading, and previous experience using P2P networks. Research also highlights hoarding and the consumption of singles in *a la carte* style downloading. Questions were constructed to measure willingness to pay for digital music, intentions to download illegally, and consumption practices. The survey was comprised of twenty questions including nominal, ordinal, and five-point Likert scale formats.

As part of the mixed-method approach, three questions contained a secondary optional open-ended response. The text box allowed participants to elaborate on their response to the parent question in their own words (Fowler, 2009). All other questions were styled in a forced-choice rather than check-all format so as to discourage “satisficing”, and to encourage participants to carefully consider their responses (Smyth, Dillman, Christian, & Stern, 2006). Evidence also suggests that non-response and abandonment is higher if the survey consists purely of open-ended questions (Toepoel, Vis, Das, & Soest, 2009). A “don’t know” option was deliberately excluded as recommended by Gilljam and Granberg (1993). Overall, the questions were phrased to minimize issues associated with social desirability bias. Respondents were presented first with simple questions and gradually introduced to ones that were more demanding.

Careful attention was paid to the construction of the questionnaire web page itself. A brief introduction outlined to respondents the study’s objectives and provided a disclaimer assuring confidentiality and anonymity. Respondents were thanked for their time at the end

of the survey and reassured of anonymity. Minor design features include a page break and progress bar which helped to reduce perceived length.

Hypotheses

The following nine hypotheses were formulated and consist of both directional and non-directional predictions.

Purchasing Intentions

H₁: Positive association between perception of MP3 price and last purchase of digital music.

H₂: Negative association between perception of MP3 price and usage of a music streaming service.

H₃: Association between satisfaction with a music streaming service and willingness to pay for a subscription.

H₄: Association between the threat of legal repercussions on P2P usage and last purchase of digital music.

Illegal Downloading Intentions

H₅: Positive association between age and justification of illegal downloading.

H₆: Association between previous P2P usage and justification of illegal downloading.

H₇: Association between perception of MP3 price and justification of illegal downloading.

Consumption Practices

H₈: Positive association between previous P2P usage and preference to build a large music collection.

H₉: Positive association between usage of a music streaming service and preference to download singles.

Statistical Procedures

The data collected from the online questionnaire was saved in an excel spreadsheet. Respondents who did not complete the survey in its entirety were deleted from the sample. The data was then imported into the SPSS software package.

Prior to analysis, the responses for some questions were recoded into new variables. For example, the responses to question #20 were transformed from “Strongly agree; Agree;

Neither agree nor disagree; Disagree; Strongly disagree” into “Agree; Neither agree nor disagree; Strongly disagree” respectively. In addition, the variable for age was recoded into two groupings of “young” and “old”, which were comprised of 18-25 year olds and 26+ year olds respectively. Doing so minimized error associated with differing interpretations of the scale and allowed for better statistical analysis.

The Chi-Square test of independence (χ^2) was used to determine the nature of the association between variables according to the stated hypotheses. Fisher’s Exact test was used in two instances where a cell did not meet the minimum expected count. Finally, the direction of statistically significant relationships was assessed using Spearman’s rho test of correlation, a non-parametric test since the data was not normally distributed.

RESULTS

This section commences with an overview of the sample. Inferential statistics will then be used to assess the validity of the hypotheses. Finally, the findings will be discussed in relation to the literature outlined previously.

Sample Overview

A total of 166 individuals attempted the questionnaire, of which 164 completed it entirely. The high completion rate can be attributed to the self-selected sample and the design of the instrument. After data cleaning a further 2 respondents were excluded, leaving final sample size of ($n = 162$).

Figure 1 demonstrates the distribution of age, constituted by 59.3% females. Respondents ranged in age from 18-60 ($M = 25.12$, $SD = 6.938$). Comparatively older participants (represented as outliers) were not removed since their consumption of digital music was representative of the target population. **Figure 2** demonstrates that males had a higher average number of listening hours per week than females, with 48.5% of males falling in the highest category compared to 38.5% of females. Participants reside 60.5% in the United Kingdom and 20.4% in the United States. The remaining 19.1% were located across the world, primarily in The Netherlands, Canada, Thailand, Switzerland, and Brazil.

iTunes and music streaming services were the most popular sources of digital music (see **Appendix A**). Streaming service users rated music selection as their most important consideration (47.9%), followed by convenience (21.8%), and sound quality (15.5%) (see **Appendix B**). Interestingly, legality was ranked as the lowest important factor (2.1%). Finally, 74.7% of respondents download music without purchasing it. Although a general statement, it nonetheless gives an indication of the sample's consumption practices.

Figure 1 Distribution of Age

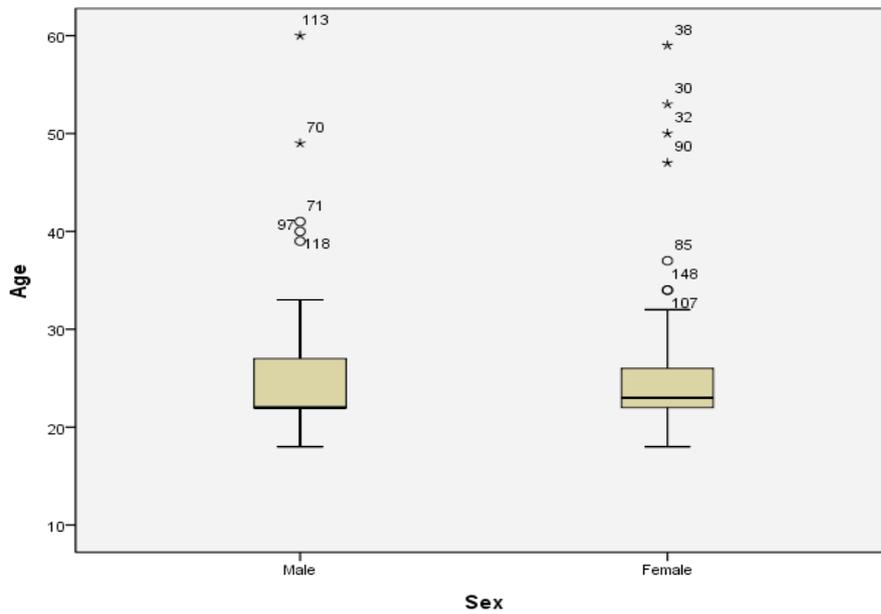
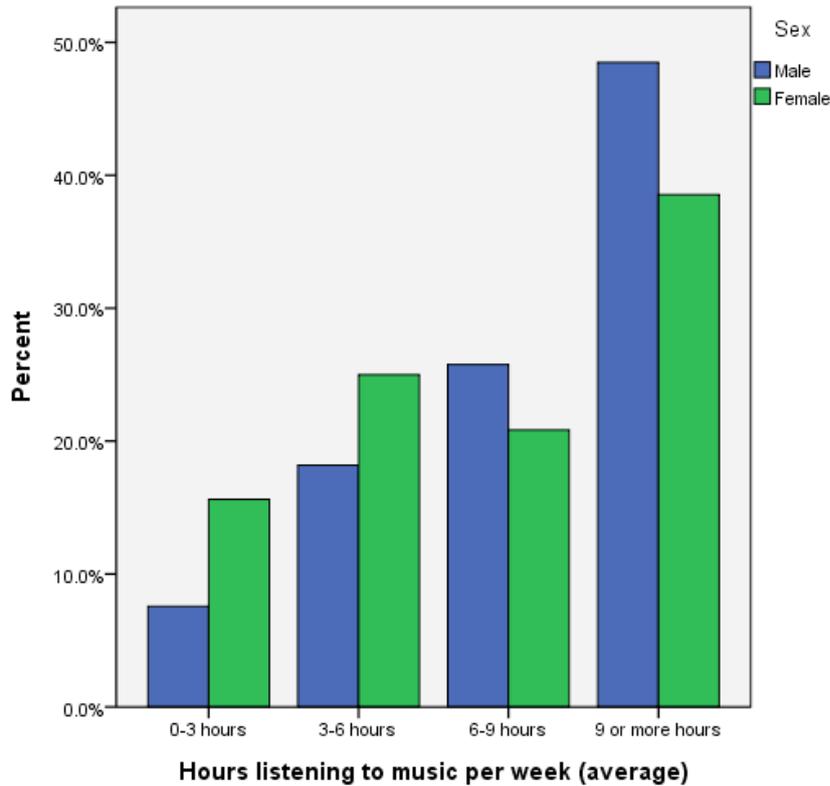


Figure 2 Average hours spent listening to music per week

Hypotheses Testing

This section provides a breakdown of the results from statistical analysis. It should be remembered that the results do not suggest causality between the variables; rather bring out the direction of correlation (Brace et al., 2000).

Purchasing Intentions

The results showed a significant association between perception of MP3 price and last purchase of digital music ($\chi^2 = 19.640$, $df = 4$, $p = 0.001$). Spearman's rho test indicated a weak correlation of 0.210. Therefore, as perceptions of the price of an MP3 increased as being fair, so too did the most recent purchase of digital music. Therefore, H_1 was supported by the data. However, there was no relationship between perception of MP3 price and usage of a music streaming service ($\chi^2 = 2.392$, $df = 2$, $p = 0.302$). Therefore, H_2 was not supported by the data.

There was no relationship between satisfaction with a music streaming service and inclination to pay for a subscription ($df = 2, p = 0.516$). Therefore, H_3 was not supported by the data. Finally, there was no relationship between the threat of legal repercussions and most recent purchase of digital music ($\chi^2 = 4.703, df = 4, p = 0.319$). Therefore, H_4 was also not supported by the data.

Illegal Downloading Intentions

There was a significant correlation between age and justification of illegal downloading ($\chi^2 = 10.483, df = 1, p = 0.001$). Spearman's rho test indicated a weak correlation of 0.310. This means that as age decreased, justification of illegal downloading increased. Hence, H_5 was supported by the data.

There was no relationship between previous P2P usage and justification of illegal downloading ($\chi^2 = 7.542, df = 6, p = 0.274$). Therefore, H_6 was not supported by the data. Finally, there was also no relationship between perception of MP3 price and justification of illegal downloading ($\chi^2 = 5.274, df = 4, p = 0.260$). Therefore, H_7 was not supported by the data.

Consumption Practices

There was a significant relationship between previous P2P usage and preference to build a large music collection ($\chi^2 = 17.943, df = 6, p = 0.006$). Spearman's rho test indicated a weak positive correlation between previous P2P usage and preference to hoard tracks of 0.232. Therefore, H_8 was supported by the data.

Finally, there was a significant relationship between music streaming usage and preference to download singles ($df = 4, p = 0.034$). Correlation of 0.049 indicated a very slight positive relationship. Therefore, H_9 was supported by the data.

DISCUSSION

This section elaborates on the findings and draws conclusions based on the broader literature. To provide a more comprehensive analysis, the quantitative results are triangulated by qualitative anecdotal evidence from the open-ended survey questions. “R” denotes respondents in order to preserve anonymity.

Purchasing Intentions

The results show that individuals, who viewed the price of an MP3 as fair, purchased digital music more recently than those who did not (see H₁). Although not entirely surprising, the finding shows that attitudes towards price are a significant factor in willingness to pay for digital music. The finding also brings attention to the discrepancies between the use and exchange value of music.

In contrast to other retail environments, pricing strategies of digital music are highly sensitive. In the purchase decision-making process, the consumer’s reference price is influenced by the readily available free good on peer-to-peer networks for instance, rather than the price offered by a competing supplier. Consequently, the disparity between what the consumer is willing to pay and the price offered is accentuated.

This is reflected in perceptions of MP3 price fairness and ultimately manifested in overall willingness to pay for digital music. The price of an MP3 was viewed as unfair by 25.3% of respondents and 23.6% of the cohort had never purchased music in a digital format. In comparison, 18.2% of consumers who perceived the price to be fair had never purchased digital music. It is likely that free legitimate sources or illegal downloads provide an alternative channel to satisfy demand for consumers who have relatively low willingness to pay for digital music.

In spite of a seemingly inexorable decline in CD sales, demand for music prevails. Digital music was purchased most recently by the 35.8% of consumers who viewed the price to be fair. For these individuals, anecdotal evidence suggests the prevalence of a general acceptance of the cost as “reasonable” (R5). The rapid growth in the market for digital music can be attributed to the consumption behavior of this group.

The association between perception of MP3 price and usage of a music streaming service was also investigated (see H₂). It was hypothesized that consumers who perceived MP3 price to be unfair would use music streaming services more often than those who viewed it as fair. Contrary to expectations, the results did not show a significant relationship. The main explanation is that usage of a music streaming service is not heavily influenced by attitudes towards the price of digital music. In other words, it is not simply the case that a consumer substitutes purchasing digital music with free streaming services. On the other hand, there is no evidence to suggest that a patron of iTunes will not use a service such as Spotify equally as regularly. The result suggests that consumers acquire music from a variety of sources on the Internet and for different reasons. Sound quality might be the decidedly attractive feature of one music outlet, whereas convenience might be an important characteristic of another.

Irrespective of whether an individual chooses to use iTunes or Spotify, it should be considered that the recording industry yields a degree of return. Most streaming providers offer a free service supported by advertising which generates revenue for the license holder. Thus, if the consumer uses the services but decides not to purchase digital music outright, their behavior still provides a source of income. The industry which lost its monopoly over the point of sale has created new ways to generate a profit in the digital age by gradually appropriating “auxiliary revenues” (Cammaerts, 2011b, p. 47). Whilst scarcity is not fully reproduced as in the sale of physical recorded music, major labels have been able to derive some profit nevertheless.

The majority of streaming users (76.5%) were satisfied with the service, in comparison to just 11.3% of users who were dissatisfied. This suggests an overall high quality and helps to explain the rapid adoption of such services. However, the findings imply that the long-term viability of the subscription-revenue model is uncertain; no significant relationship was found between satisfaction with a music streaming service and inclination to subscribe (see H₃). It is possible that users are not motivated to subscribe to a service out of satisfaction alone. Rather, they place disproportionate emphasis on considerations such as the music selection and functionality with other devices. The most likely explanation is that the consumer perception is that it is not worth paying for subscription services.

The final area examined under the rubric of intentions to purchase music was the relationship between the threat of legal ramifications and the consumer’s most recent purchase (see H₄). For example, 38% of participants who had previous experience using P2P networks agreed that the threat of legal repercussions had curbed their usage. Whereas, 36.5% felt that it did not affect their usage. The creative industries as a whole have sought to

prosecute file sharers in response to rampant copyright infringement. The results suggest that upfront policies have been moderately successful. By decreasing the usage of P2P networks amongst some of the population, the overall level of copyright infringement has probably been reduced.

As outlined in the literature review, research has sought to establish causation between illegal file sharing on P2P networks and the decline in sales of CDs. Crucially, no significant association was found between the threat of legal repercussions and the purchase of digital music. Legal measures might have been effective in stemming copyright infringement, but have been far less effective in recouping revenue forfeited to piracy. One explanation is that consumers have simply grown accustomed to free music and resultantly have a very low willingness to pay. In this case, they acquire music through other unlawful channels as P2P networks decline in popularity. With the establishment of music blogs and social media, some of these users have migrated to sources such as file hosting websites (Cammaerts & Meng, 2011). Finally, the result strengthens the argument that the majority of file sharing on P2P networks is primarily in music that otherwise would not have been purchased in the first place. Once consumers cease using P2P networks, it reasonable to assume that they would not be willing to purchase the same content from a legitimate outlet. Therefore, some of the recording industry's claims about the magnitude of losses from copyright infringement appear to be exaggerated.

Illegal Downloading Intentions

The results show a significant positive association between age and justification of illegal downloading (see H₅). For example, 81% of the 18-25 age group felt that illegal downloading could be justified compared to 50% of the 26+ age group. Conversely, only 19% of the 18-25 age group felt that illegal downloading could not be justified, in contrast to 50% of the 26+ age group. The variance is partly attributable to the liberal mindset of younger university students relative to the older participants and is not necessarily reflective of actual behavior. Without showing causation, the result implies that younger consumers have more favorable attitudes towards illegal downloading than do older consumers. According to the theory of planned behavior, by virtue of having favorable views towards illegal downloading, the individual would be more inclined to engage in it.

For many members of the younger population, the practice of copyright infringement does not raise any serious moral or ethical concerns. One participant noted that they used P2P networks to download music without fully considering the legality of doing so (R25). A

second recognized that copyright infringement might be unlawful, but likened the activity to drivers who break the speed limit (R111). A more extreme view held by one respondent was that downloading does not at all constitute an “illegal” act (R95). A final participant expressed that they did not “feel it as an illegal activity” (R80). Taken together, the responses suggest a degree of naivety as well as disregard for copyright law.

Justifications for illegal downloading were also embedded in the notion that information on the Internet should be free and accessible to all. One participant argued “music should be about sharing, and should be available to everyone” (R71), whilst a second cited the prevalence of the “information sharing age” (R140). These views reflect the moral conviction that the Internet is a resource for “consumer empowerment, social inclusion, and distributive justice” (Rojek, 2005, p. 266). It is understandable how younger consumers arrive at this standpoint, given the history of the Internet as provider of information and as host to free sources such as Wikipedia. In contrast, older consumers have experience purchasing music in a physical format and have grown accustomed to paying for their music. This could help to explain their relatively negative views towards illegal downloading.

Furthermore, justifications were grounded in the sampling argument and in the positive network effects of file sharing. One participant suggested that downloading enables consumers to acquire “taster tracks” (R59). A second portrayed downloading as a means of “investigating music before purchasing the physical equivalent” (R159). Downloading could also be used to acquire material which otherwise would not have been purchased. One participant noted its potential to broaden the fan base and for rapidly promoting music (R121).

In all, the evidence suggests the prevalence of a norm of copyright infringement amongst younger consumers of music, consistent with previous research (Balestrino, 2008; Feldman & Nadler, 2006; Huang; 2005). The norm and attitude help to explain why individuals would not consider illegal downloading to be an issue of serious concern, as they would perhaps with stealing a CD from a store. Digital piracy has conceivably increased the aggregate level of welfare in society by enabling more people to access and sample music. The relative failure of the emergence of an anti-piracy norm amongst this cohort of consumers is due to the lack of perceived value in doing so. Hence, no real social stigma has been attached to piracy precisely because there is no perceived social value to be gained (Balestrino, 2008).

The relationship between previous experience of P2P networks and attitudes towards illegal downloading was also examined. 28% of participants described their prior usage of P2P

networks as heavy, 37% as moderate, and 35% as light. Surprisingly, no significant relationship was found (see H₆) between previous experience and present attitudes towards illegal downloading.

Assuming that present attitudes towards downloading did not change over time, the results suggest that consumers engaged in P2P file sharing irrespective of whether they felt it could be justified. In this respect, the theory of planned behavior around the relationship between attitudes and intentions has limited explanatory capability. Although a consumer might hold negative attitudes towards illegal downloading, they nevertheless could have engaged in the activity due to a number of other reasons. As such, intentions to download music illegally are constituted by a number of complex factors.

Most consumers could be easily situated within one of Lessig's (2004) four groups of P2P network users. However, there appeared to be a fundamental inconsistency between the attitudes held by some participants and the intentions to download music illegally. Amongst those who rejected illegal downloading outright, a small number nevertheless stated that they would in certain circumstances. For example, it was deemed acceptable in the pursuit of a rare music file or of one unavailable for purchase from legal outlets (R39). In this respect, illegal downloading is simply used to satisfy demand that existing markets fail to meet (Cenite et al., 2009).

The final relationship examined was between perception of MP3 price and attitude towards illegal downloading. Contrary to expectations, no significant relationship was found (see H₇). It is likely that consumers justified illegal downloads on grounds other than simply because digital music was perceived to be too expensive. This is consistent with research that suggests utilitarian motivations constitute only one of the factors that influence intentions to download.

Participants interpreted the meaning of "fair" in a number of ways. At a basic level, it was taken to mean a fair valuation of the product. For these consumers, antipathy towards the music industry constituted one of the main underlying justifications of illegal downloading. Participants expressed dissatisfaction with the direction of revenue from digital music sales, which they perceived as "money to the music business" (R45) rather than to the musicians. The sentiment is consistent with Rojek's (2005, p. 362) portrayal of downloaders who see themselves as "striking a blow against injustice and inequality". Sentiment also reflected frustration with digital rights management technologies. One participant commented on the "constraints" (R36) imposed by the market in the digital realm. Even if the owner has

purchased a digital file outright, they might still be constrained in its usage. As one respondent noted, sometimes “I do not feel like I ‘own’ the music that I buy” (R103).

More broadly, “fair” was taken to mean fairness to the artist who created the work. For these consumers, idolatry played a large role in their attitudes towards illegal downloading. Some felt that it should be rejected under any circumstances, i.e. “people should always pay” (R104). The greatest concern expressed was in reimbursing the musician or the creator for their work to encourage further creativity and music production. Indeed, consumers noted that artists need to be paid for their production which in turn allows them to “continue to create music” (R10). Affinity for the musician is expressed in the repeated use of the word “art” to describe music, rather than song or track. Finally, empathy is shown with the artists or “hard-working people” of the music business, rather than the music executives (R116).

Consumption Habits

The final theme addresses the consumption practices and habits of digital music consumers. A positive association was found between previous P2P usage and preference to build a collection of as many music files as possible (see H₈). 66.7% of the heaviest P2P users attempt to build a prodigious collection of music files as possible, in contrast to only 30.8% of respondents who used P2P networks the least. On the other hand, 12.1% of the heaviest P2P users do not hoard music files, in comparison to 25.6% of the lightest P2P users.

A superficial explanation would point to the role of digital technologies and the Internet. To be sure, the introduction of digital technologies has fundamentally altered the way in which music is consumed (Lee, 2009). Rapid advances in technology and a persistent decrease in personal computing costs have provided consumers with the capacity to store thousands of songs. Piracy of digital music effectively removed any financial limitations that might have previously limited purchasing just one album per week. In fact, the creation of the market for mobile music players such as the iPod can be attributed to peer-to-peer file sharing (David, 2010). Without the previous combination of factors, few would be able to acquire such extensive libraries of music from the outset. In some instances, consumers acquire libraries that contain more files to which it is physically impossible to listen.

A more complex set of processes is behind the observed tendencies towards hoarding amongst the heavier users of P2P networks. Given the absence of physical packaging or the CD insert sleeve, hoarding is conceivably a byproduct of digitized music. Consumers derive new sources of pleasure from obtaining access and consolidating a database of music files

(Burkart, 2008). In order to compensate for its immateriality, new ways of searching, collecting, and maintaining a library of music files have emerged. Indeed, Kibby (2009) asserted that organizing a large collection of files makes up for the materiality that MP3s lack. Descriptive norms have also played a role. On P2P networks, users are encouraged to engage in more excessive downloading after viewing the extensive libraries of others (LaRose & Junghyun, 2007). The process of circulation is intensified as consumers feel the need to create value for something that has no physical presence (McCourt, 2005). Finally, changes have taken place in the importance attached to the consumption of music itself. Some participants highlighted the importance of things other than the music, such as live performances or band merchandise (R21; 56; 71; 74). In doing so, they more readily justified their illegal download of an artist's music. This finding is consistent with Leyshon's et al.'s (2004) argument that the consumption of music has become fundamentally integrated into capitalism. In any case, it could be argued that the immateriality of digital music marks a shift back to the era before recorded music formats, when it was enjoyed purely in the moment (McCourt, 2005).

Finally, the results indicate a very weak positive relationship between usage of a music streaming service and preference to download singles rather than albums (See H₉). The finding is indicative of music consumption in the "iTunes era" (Waldfogel, 2009). Now that consumers have the liberty to purchase music *à la carte* and bundle songs to match tastes, the album is losing popularity. To be sure, a substantial group of music consumers will remain preoccupied with albums. However, the trend towards preference for singles downloads is likely to strengthen with music industry's transition to the digital market.

Implications and Further Research

The finding that satisfied users of a streaming music service are not willing to subscribe raises questions about the long-term viability of the streaming business model, especially in the strategic UK market where the majority of participants reside. For the model to be sustainable, it is necessary to convert approximately 10-12% of the user base in a region into paying subscribers (Barnett, 2010). In the UK and Spain, Spotify pays one of the major record labels with revenue generated on a per user basis, rather than from revenue generated via advertising and subscriptions. If the service fails to reach the required threshold, then its ability to generate revenue for the license holder is reduced. Questions therefore are raised about the potential for other business models. Research is still in exploratory stages. Quiring, Walter, and Atterer (2008, p. 437) examine the viability of a "distribution revenue model", an alternative model based on a combination of server-based services and decentralized music

distribution via P2P networks. Further work is required to assess whether factors underlying willingness to pay differ between countries.

Although policies and litigation have decreased the usage of P2P networks, music is still downloaded illegally from a variety of sources. The findings of this study point to the importance of norms and attitudes held amongst younger consumers especially. Blunt measures might have been counter-productive, since many perceived them to be unfair and inconsistent with the liberating potential of digital technologies (Rojek, 2005). The tipping point for legislators and the recording industry, appears to lie in shaping the attitudes of consumers towards illegal downloading. For example, consumers who had purchased digital music most recently also showed a greater degree of affinity with the recording artist. They expressed an understanding of the mechanisms of copyright and wished to further creativity by reimbursing the artist directly. If the revenue stream were made transparent, then perhaps consumers would be more willing to purchase music from legitimate sources. Further research is therefore needed into the effectiveness of educational or awareness campaigns that aim to reduce piracy and encourage spending. Indeed, a better approach would be to tackle the social and cultural dynamics underlying piracy (Condry, 2004).

Finally, the hoarding of music files and preference for singles over albums has implications for the record label and for the recording artist. Given the lower value attached to digital rather than physical music, it seems that constraints imposed on consumers in streaming services are incompatible with desires to hoard and manipulate collections of music. Services which are more amenable to these consumption preferences are likely to succeed. As one participant expressed, “there’s something about owning my music collection that’s important to me” (R131). By designing the service to satisfy these preferences, it is likely that a greater proportion would be willing to pay for it. In brief, services must be perceived to be qualitatively better for consumers to be willing to pay for it (Ye, Zhang, Nguyen, & Chiu, 2004). Further research is required into the driving factors behind emerging practices of music consumers, and the extent to which feelings of ownership over intangible music are valuable to consumers.

Limitations

For the purposes of this study, the web-based approach has provided valuable empirical evidence. However, methodological limitations stem from the online questionnaire. The sample comprised a large portion of people educated to the bachelors or masters level. In contrast to the general population, these respondents are likely to be more informed about

the key debates of copyright infringement. Secondly, individuals with a greater affinity for music would have been more likely to self-select into the sample since the survey was titled “Digital Music Questionnaire”. Similarly, those with the strongest views were more likely to have answered the optional open-ended questions. Finally, the survey instrument quantified consumption in terms of the respondent’s most recent use/purchase of the good or service. This was deliberately structured to avoid error that occurs in the interpretation of scales. Although it can be considered a representative measure of consumption, frequency of use and the most recent purchase cannot be directly equated. Overall, the findings should be applied with caution to the general population. A range of variables beyond the scope of this study have influence on the consumption of digital music.

CONCLUSION

A complex set of factors underpins the consumption of digital music. Despite the prevalence of piracy on the Internet, a significant portion of consumers are willing to use legitimate paid outlets such as iTunes. However, far less see value in subscribing to a streaming service. For the youngest generation, it appears that a norm of copyright infringement prevails as a result of repeated practice across the population and a belief in the Internet as free. Nonetheless, the results indicate that most copyright infringement on P2P networks is of content that otherwise would not have been purchased.

Many pre-existing assumptions about individuals who engage in digital piracy are misconceived. In exceptional circumstances, even the most hard-nosed consumer will contradict their own moral or ethical framework, in order to satisfy a demand for product that the market fails to meet. A desire to reimburse the musician for their work so as to promote further creativity, serves as a barrier to illegally downloading.

The results point to limitations in the sustainability of a business model based on music streaming services. Sound quality and music selection are appreciated by the consumer, however, satisfaction does not correspond with willingness to subscribe. It should be remembered that the majority of respondents resided in the UK or US. Therefore, further study is required to explain variance between different cultures.

One issue in need of further investigation is the extent to which feelings of ownership are important. As streaming music services increase in popularity, the question is raised whether it is necessary to “own” digital music that is paid for, or whether access is sufficient. This

study has shown that the intangibility of digital music is associated with practices of consumption that allow the consumer to derive satisfaction. In particular, preference for singles over albums will put pressure on the record label and the artist to adapt.

The results suggest that blunt legal measures to counter piracy are potentially counter-effective. Consumers are sensitive to the expansion of intellectual property rights and DRM technologies. Attempts to create scarcity in the distribution of digital music could foster negative attitudes towards the music industry and decrease willingness to pay. This result provides support for educational or awareness programs to tackle piracy. In any case, policies should take into account new forms of copyright infringement as the popularity of P2P networks declines. Further research is required to establish the factors that would persuade those with favorable attitudes towards illegal downloading to consume music from legitimate sources.

Although this study is not free from limitations, it has contributed to understanding of the conflict between the construction of digital music as a product and the construction of digital music as a gift. The conclusions are particularly relevant to other cultural industries such as the film industry which has experienced similar changes associated with the introduction of digital technologies and copyright infringement. Given the dynamic nature of the Internet, new questions surrounding the power of rights holders are likely to emerge as digital technologies, such as cloud-based music services, are adopted by consumers.

REFERENCES

- Ajzen, I. (1991) The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Balestrino, A. (2008) It is a theft but not a crime. *European Journal of Political Economy*, 24, 455-469.
- Barker, J. C. (2005) Grossly Excessive Penalties in the Battle Against Illegal File-Sharing: The Troubling Effects of Aggregating Minimum Statutory Damages for Copyright Infringement. *Texas Law Review*, 83, 525-559.
- Barnett, E. (2010, January 21) Spotify now makes record labels money. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/technology/news/7043818/Spotify-now-makes-record-labels-money.html>
- Baym, N. K. (2010) Rethinking the Music Industry. *Popular Communication*, 8(3), 177-180.
- Baym, N. K. (2011) The Swedish Model: Balancing Gifts in the Music Industry. *Popular Communication*, 9(1), 22-38.
- Becker, J. U., & 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.
- Bellemare, M. F. & Holmberg, A. M. (2010) The Determinants of Music Piracy in a Sample of College Students. *Duke University - Sanford School of Public Policy; Duke University - Department of Economics*.
- Bettig, R. V. (1996) *Copyright Culture: The Political Economy of Intellectual Property*. Boulder, CO: Westview Press.
- Bhattacharjee, S., Lertwachara, K., Gopal R. D., & Marsden, J. R. (2006) Impact of Legal Threats on Online Music Sharing Activity: An Analysis of Music Industry Legal Actions. *Journal of Law and Economics*, 49, 91-114.
- Blackburn, D. (2004) On-line Piracy and Recorded Music Sales. *Harvard University: Department of Economics*.
- Boucher, R. (2002). The future of intellectual property in the information age. In Thierer, A. D., and Crews, C. W. (Eds.), *Copy fights: the future of intellectual property in the information age* (95-105). Washington, D.C.: Cato Institute.
- Bryman, A. (2008) *Social Research Methods. 3rd Edition*. Oxford: Oxford University Press.
- Burkart, P. (2008) Trends in Digital Music Archiving. *The Information Society*, 24(4), 246-250.
- Cammaerts, B. & Meng, B. (2011) Creative Destruction and Copyright Protection: Regulatory Responses to File-Sharing. *Media Policy Brief 1*. Retrieved from <http://www.scribd.com/doc/51217629/LSE-MPPbrief1-creative-destruction-and-copyright-protection>
- Cammaerts, B. (2011a) The hegemonic copyright regime vs the sharing copyright users of music? *Media, Culture & Society*, 33(3), 491-502.
- Cammaerts, B. (2011b) Disruptive sharing in a digital age: Rejecting neoliberalism? *Continuum: Journal of Media & Cultural Studies*, 25(1), 47-62.
- Cenite, M. Wanzheng, M., Peiwen, C., & Chan, G. S. (2009) More Than Just Free Content: Motivations of Peer-to-Peer File Sharers. *Journal of Communication Inquiry*, 33(3), 206-221.

- Chiang, E. P., & Assane, D. (2009) Estimating the Willingness to Pay for Digital Music. *Contemporary Economic Policy*, 27(4), 512-522.
- Condry, I. (2004) Cultures of music piracy: An ethnographic comparison of the US and Japan. *International Journal of Cultural Studies*, 7(3), 343-363.
- Couper, M. P. (2000) Web Surveys: A Review of Issues and Approaches. *Public Opinion Quarterly*, 64, 464-494.
- Creswell, J. W. (2009) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage.
- Cronan, T. P., & Al-Rafee, S. (2008) Factors that Influence the Intention to Pirate Software and Media. *Journal of Business Ethics*, 78, 527-545.
- David, M. (2010) *Peer to Peer and the Music Industry: The Criminalization of Sharing*. London: Sage.
- Davies, M. B. (2007) *Doing a successful research project: using qualitative or quantitative methods*. Palgrave: Basingstoke.
- Dillman, D. A. (2007) *Mail and Internet Surveys: The Tailored Design Method. 2nd ed.* Hoboken, N.J.: Wiley.
- Dolfsma, W. (2000) How Will the Music Industry Weather the Globalization Storm? *First Monday*, 5(5). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/745/654>
- Duffy, B. & Smith, K. (2005) Comparing data from online and face-to-face surveys. *International Journal of Market Research*, 47(6), 615-639.
- Feldman, Y. & Nadler, J. (2006) The Law and Norms of File Sharing. *San Diego Law Review*, 43, 577-618.
- Fowler, F. J. Jr. (2009) *Survey Research Methods. 4th ed.* London: Sage.
- Fox, M. (2005). Technological and Social Drivers of Change in the Online Music Industry. *First Monday*, Special Issue #1. Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1453/1368>
- Friedlander, J. P. (2010). News and Notes on 2010 RIAA Music Shipment Data. Retrieved from: <http://76.74.24.142/548C3F4C-6B6D-F702-384C-D25E2AB93610.pdf>
- Geisler, M. (2006) Consumer Gift Systems. *The Journal of Consumer Research*, 33(2), 283-290.
- George, C. and Chandak, N. (2006) Issues and challenges in securing interoperability of DRM systems in the digital music market. *International Review of Law, Computers & Technology*, 20(3), 271-285.
- Gillespie, T. (2004) Copyright and Commerce: The DCMA, Trusted Systems, and the Stabilization of Distribution. *The Information Society*, 20(4), 239-254.
- Gilljam, M. & Granberg, D. (1993) Should we take don't know for an answer? *Public Opinion Quarterly*, 57, 348-357.
- Gopal, R. D., Sanders, G. L., Bhattacharjee, S., Agrawal, M., & Wagner, S. C. (2004) A Behavioral Model of Digital Piracy. *Journal of Organizational Computing and Electronic Commerce*, 14(2), 89-105.

- Hille, K. (2011, July 19). Baidu reaches music download deal. *The Financial Times*. Retrieved from: <http://www.ft.com/cms/s/o/b8847728-b202-11e0-a06c-00144feabdco.html#axzz1VHNMYf5U>
- Hsu, J. L., & Shiue, C. W. (2008) Consumers' Willingness to Pay for Non-pirated Software. *Journal of Business Ethics*, 81, 715-732.
- Huang, C. (2005) File Sharing as a Form of Music Consumption. *International Journal of Electronic Commerce*, 9(4), 37-55.
- Hui, K., & Png, I. (2003) Piracy and the Legitimate Demand for Recorded Music. *Contributions to Economic Analysis & Policy*, 2(1), 1-22.
- Katz, D. (1960) The Functional Approach to the study of Attitudes. *Public Opinion Quarterly*, 24(2), 163-204.
- Kibby, M. (2009) Collect Yourself: Negotiating Personal Music Archives. *Information, Communication & Society*, 12(3), 428-443.
- Kinnally, W., Lacayo, A., McClung, S., & Sapolsky, B. (2008) Getting up on the download: college students' motivations for acquiring music via the web. *New Media & Society*, 10(6), 893-913.
- Kwong, K. K., Yau, O. H. M., Lee, J. S. Y., Sin, L. Y. M., & Tse, A. C. B. (2003) The Effects of Attitudinal and Demographic Factors on Intention to Buy Pirated CDs: The Case of Chinese Consumers. *Journal of Business Ethics*, 47, 223-235.
- Landau, M. (2002) Digital Downloads, Access Codes, and US Copyright law. *International Review of Law Computers*, 16(2), 149-170.
- LaRose, R. & Kim, J. (2007) Share, Steal, or Buy? A Social Cognitive Perspective of Music Downloading. *CyberPsychology & Behavior*, 10(2), 267-277.
- Lee, J. (2009) Contesting the digital economy and culture: digital technologies and the transformation of popular music in Korea. *Inter-Asia Cultural Studies*, 10(4), 489-506.
- Lessig, L. (2004) *Free culture: how big media uses technology and the law to lock down culture and control creativity*. New York, NY: Penguin Press.
- Leyshon, A., Webb, P., French, S. Thrift, N., & Crewe, L. (2005) On the reproduction of the musical economy after the Internet. *Media, Culture & Society*, 27(2), 177-209.
- Liebowitz, S. J. (2008) Research Note: Testing File-Sharing's Impact on Music Album Sales in Cities. *Management Science*, April, 1-17.
- Liebowitz, S. (2007) How Reliable is the Oberholzer-Gee and Strumpf paper on File-Sharing? *University of Texas at Dallas: School of Management*.
- Lindvall, H. (2011, February 1) Spotify should give indies a fair deal on royalties. *The Guardian*, Retrieved from <http://www.guardian.co.uk/media/pda/2011/feb/01/spotify-royalties-independentents>
- Mansell, R. (1999) New Media Competition and Access: The Scarcity-Abundance Dialectic. *New Media & Society*, 1(2), 155-182.
- Mansell, R. (2004) Political economy, power and new media. *New Media & Society*, 6(1), 96-105.
- May, C. (2007) *Digital Rights Management: The Problem of expanding ownership rights*. Oxford: Chandos Publishing.
- McCourt, T. (2005) Collecting Music in the Digital Realm. *Popular Music and Society*, 28(2), 249-252.

- McCourt, T. and Burkart, P. (2003) When Creators, Corporations and Consumers Collide: Napster and the Development of On-line Music Distribution. *Media, Culture & Society*, 25, 333-350.
- Molteni, L. and Ordanini, A. (2003) Consumption Patterns, Digital Technology and Music Downloading. *Long Range Planning*, 36, 389-406.
- Montoro-Pons, J. D., & Cuadrado-Garcia, M. (2006) Digital goods and the effects of copying: an empirical study of the market. *Paper presented at the 14th International Conference on Cultural Economics, Vienna, Austria, July 6-9*.
- Oberholzer-Gee, F., & Strumpf, K. (2007) The Effect of File Sharing on Record Sales: An Empirical Analysis. *Journal of Political Economy*, 115(1), 1-42.
- Peitz, M., & Waelbroeck, P. (2006) Why the music industry may gain from free downloading – The role of sampling. *International Journal of Industrial Organization*, 24, 907-913.
- Poster, M. (2010) Consumption and Digital Commodities in the Everyday. *Cultural Studies*, 18(2), 409-423.
- Quiring, O., Von Walter, B., & Atterer, R. (2008) Can filesharers be triggered by economic incentives? Results of an experiment. *New Media & Society*, 10(3), 433-453.
- Rob, R., & Waldfogel, J. (2006) Piracy on the High C's: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students. *Journal of Law and Economics*, 49(1), 29-62.
- Rojek, C. (2005) P2P Leisure Exchange: Net Banditry and the Policing of Intellectual Property. *Leisure Studies*, 24(4), 357-369.
- Sandulli, F. D. and Martin-Barbero, S. (2007) 68 Cents per Song: A Socio-Economic Survey on the Internet. *Convergence*, 13(1), 63-78.
- Scott, A. J. (1999) The US recorded music industry: on the relations between organization, location, and creativity in the cultural economy. *Environment and Planning*, 31, 1965-1984.
- Smyth, J. D., Dillman, D. A, Christian, L. M., & Stern, M. J. (2006) Comparing check-all and forced choice question formats in web surveys. *Public Opinion Quarterly*, 70(1), 66-77.
- Sterne, J. (2006) The mp3 as cultural artifact. *New Media & Society*, 8(5), 825-842.
- Storm? *First Monday*, 5. Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1461/1376>
- Styven, M. E. (2010) The need to touch: Exploring the link between music involvement and tangibility preference. *Journal of Business Research*, 63, 1088-1094.
- Sweeney, M. (2011, June 20) Citigroup lines up EMI sale. *The Guardian*, Retrieved from <http://www.guardian.co.uk/business/2011/jun/20/citigroup-lines-up-emi-sale>
- Sylva, J. P. (2000) Digital Delivery and Distribution of Music and Other Media: Recent Trends in Copyright Law; Relevant Technologies; and Emerging Business Models. *Loyola of Los Angeles Entertainment Law Review*, 20, 217-242.
- Terranova, T. (2000) Free Labor: Producing Culture for the Digital Economy. *Social Text*, 63(18), 33-58.
- Toepoel, V., Vis, C., Das, M., & Soest, A. V. (2009) Design of Web Questionnaires: An Information-Processing Perspective for the Effect of Response Categories. *Sociological Methods & Research*, 37(3), 371-392.
- The British Recorded Music Industry (2010) Digital Music Nation: The UK's Legal and Illegal Digital Music Landscape. Retrieved from: <https://bpi.co.uk/assets/files/Digital%20Music%20Nation%202010.pdf>

- Waldfoegel, J. (2009) Music Files Sharing and Sales Displacement in the iTunes Era. *University of Pennsylvania: The Wharton School*.
- Wang, C., Chen, C., Yang, S., & Farn, C. (2009) Pirate or Buy? The Moderating Effect of Idolatry. *Journal of Business Ethics*, 90, 81-93.
- Wang, X., and McClung, S. R. (2010) Toward a detailed understanding of illegal digital downloading intentions: An extended theory of planned behavior approach. *New Media & Society*, 13(4), 663-677.
- Yar, M. (2005) The global 'epidemic' of movie 'piracy': crime-wave or social construction? *Media, Culture & Society*, 27(5), 677-696.
- Ye, L. R., Zhang, Y. J., Nguyen, D., Chiu, J. (2004) Fee-based Online Services: Exploring Consumers' Willingness to Pay. *Journal of International Technology and Information Management*, 13(2), 133-141.
- Zentner, A. (2006) Measuring the Effect of File Sharing on Music Purchases. *Journal of Law and Economics*, 49(1), 63-90.

APPENDICES

Appendix A: Popularity of Digital Music Sources

Digital Music Sources

		iTunes	BitTorrent	File hosting websites	Music streaming service	Peer-to-peer (P2P) networks	YouTube MP3 converter
N	Valid	160	146	148	157	148	143
	Missing	2	16	14	5	14	19
	Median	4.00	1.00	2.00	3.00	1.00	2.00
	Mode	4	1	1	4	1	1

Note: 1 = “Never”; 2 = “Seldom”; 3 = “Sometimes”; 4 = “Often”

Appendix B: Most Important Consideration of Music Streaming Services

	Frequency	Percent
Music Selection	68	47.9%
Convenience	31	21.8%
Sound quality	22	15.5%
Price	13	9.2%
Other	5	3.5%
Legality	3	2.1%
Total	142	100.0%

Note: 12.3% (20) do not use music streaming services.

Electronic MSc Dissertation Series

Media@lse Electronic MSc Dissertations will:

Present high quality MSc Dissertations which received a mark of Distinction (72% and above).

Selected dissertations will be published electronically as pdf files, subject to review and approval by the Editors.

Authors retain copyright, and publication here does not preclude the subsequent development of the paper for publication elsewhere.
