Theory and Evidence

The Economic Utility of the Compact Disc

by

Kate Totaro

An honors thesis submitted in partial fulfillment

of the requirements for the degree of

Bachelor of Science

Undergraduate College

Leonard N. Stern School of Business

New York University

May 2006

Professor Marti G. Subrahmanyam	Professor Samuel Craig
Faculty Adviser	Thesis Advisor

TABLE OF CONTENTS

1. ABSTRACT

Despite the music industry's historical format evolution—from vinyl to 8-track, 8-track to cassette, and cassette to CD—today's music world is facing a slightly different situation: today's replacement format (free and for purchase online digital music) is different than those replacements of the past, most notably, because it is not tangible. Unlike the switch from vinyl to 8-track, the transition from CD to online music is not comparable. In the first case, the purchaser can physically hold, feel, see their investment. However, with the digital revolution, the consumer is purchasing a right: a right to listen, a right to burn, a right to share. In my exploration, I aim to answer the following questions: Will tangible music remain relevant for today's college aged consumers (the music industry's most profitable audience)? If so, what utility do these consumers gain from tangible music as opposed its digital alternative? How will the interaction between digital and tangible music shape the future of the music industry?

Through primary research and industry exploration, I have identified a small but dedicated population of CD enthusiasts and a broader population of "sometimes-CD-purchasers" within the college aged demographic. Both of these populations' demands are large enough to maintain a viable tangible music market. The utility that consumers gain from tangible music seems to stem from traits such as authenticity, collectability, displayability, safety (perceived permanence), and enhancements. While consumers will continue to demand tangible music, a relevant portion of future industry revenues will develop from the digital music realm, including mobile phone music, streaming music, bundled downloads, and singles downloads.

2. INTRODUCTION

> *[Music] can no longer be defined against the everyday as something unusual; music is now the everyday (and silence becomes the mark of the special moment: a minute's silence to observe death; the silence in a film which accompanies the most intense tension or ecstasy).*
>
> *~Simon Frith*
> *Performing Rights: On the Value of Popular Music*

Let's take a time warp through the evolution of music: music began as a form of aural communication passed through bodies and instruments, was revolutionized when standardized notation was developed, giving people access to a transcendent form of music, then was reinvented again when recording technology broke down the previous barriers of space and time, turning music into a personal commodity. As is obvious, the music industry is no stranger to innovation. Just speaking to recording technology alone, from vinyl, to 8-track, cassette, and compact disc, the industry has continually evolved to adapt to new technology. And, as can be inferred, the future of music will depend on the industry's ability to embrace and control this.

Despite the historical format evolution, today's music world is facing a slightly different situation: today's replacement format, digital music[1], is different than those replacements of the past, most notably, because it is not tangible. Unlike the switch from vinyl to 8-track, the transition from CD to online music is not comparable. In the first case, purchasers can physically hold, feel, see their investment. However, with the digital revolution, the consumer is purchasing a right: a right to listen, a right to burn, a right to share. In my exploration, I investigate if and how much college aged students (the music industry's most profitable audience) value of tangible music (i.e. the CD[2]) over that of free or for-purchase digital music.

[1] When I use the term "digital music", I am referring to downloadable music. Although CDs utilize a digital format, it has become common practice to use "digital music" to refer to music available online either for free or for-purchase.
[2] "CD" and "tangible music" are also used interchangeably.

Additionally, I will investigate what the impact of the digital revolution will be on the industry, both short-term and long-term. Is digital music simply another form of advertising similar to radio play and music videos? Will consumer access to music replace ownership of music? What will the business structure of the industry look like in the future? Are CDs going to remain on the shelves or does online music spell the demise of retail music stores?

I predict that the student survey will reveal a small yet dedicated population of CD enthusiasts as well as a broader population of "sometimes-CD-purchasers". Both of these populations' demand will be large enough to maintain a viable tangible music market. I also predict that the industry will be drastically impacted by the ever-increasing access to free or very inexpensive music. While the CD will remain the primary driver of revenues, digital access will take multiple forms, catering to ever evolving consumer demand. Additionally, with this overhaul will come a reevaluation of artist relations and the role of current music labels.

While this project will aim to answer big questions, the scope of the study is obviously limited. Because of time and access to resources I will focus my studies on college aged students. Hopefully, this glimpse into the industry will spur further contemplation for the future of both digital and tangible music.

In the remainder of this paper I will first describe and analyze the industry and its outlook for the future of music. With the background laid, I will then discuss my study of college-aged students and their attitudes towards music consumption and the utility of tangible music. Finally, I will compile my research and study findings to form my own prediction for the future of the music industry and, more specifically, the future of the compact disc.

3. THE DIGITAL WORLD

> *Nothing would be possible or useful without content. Content is still hugely important. Artists and music are at the heart of everything we do. Compelling content is absolutely vital. But brilliant music, while absolutely imperative, is no longer sufficient on its own; we must constantly be looking for new ways to provide consumers with what they want. Today's consumer is intelligent, and sophisticated, and demanding, and promiscuous in terms of their loyalty to brands and we're always looking for ways of filtering their demands. So producing an astonishing piece of music is still as important as ever, but it's not much use if no one gets to hear it.*
>
> ~ Eric Nicoli
> Chairman, EMI Group

As EMI Chairman, Eric Nicoli points out, good music is no longer enough. In order to survive and be heard in this new atmosphere of music consumption, in which the number of regular music downloaders is growing at a rate of over 100 percent annually (Kusek, 2005, p.101), labels and artists need to adapt appropriately. If not approached correctly, the digital market could severely harm the overall music business; however, if optimized, the digital market could catapult the success of the whole industry through increased consumer exposure and access. So, the fundamental and pressing question becomes: How can and will the potential of digital music be optimized for the industry?

Interestingly, an analogy of the current atmosphere of music consumption can be made with many other entertainment industry sectors, including the film and pornography industries. In the film industry, the 1980s were the inflection point. During that time, the advent of the VHS tape was predicted to kill the movie business; however, in hindsight, VHS actually grew the film industry, offering customers different options for experiencing content, and now the home video market makes up an astonishing portion of film revenues.

The pornography industry also parallels the music industry in that it was blindsided by the potential of online content. The internet effectively broke the distribution monopoly that moguls like Hefner and Flynt enjoyed in the pornography industry. It provided opportunities for

new entrepreneurs to challenge the traditional system and establish multiple sources of revenue. In fact, the internet helped to increase the pornography industry's overall revenue ten-fold.

While traditional music labels—just like traditional pornography media—will still have a role with the advent of digital content, their impact will be hugely diminished if they are not able to harness the potential of the online medium. As David Kusek states in his book, *The Future of Music: Manifesto for the Digital Revolution*, "Both the entrenched porn kings and the music kings failed to see the potential of the Internet for new business models, and were caught entirely off guard by what happened" (Kusek, 2005, p.75). And, as Dan Bricklin quips in his article on the same topic, "Record companies complain about the consolidation of radio station ownership and the cost of paying off radio stations to play their music so we can listen for 'free' and figure out what we'd like to buy. At the same time they are trying to kill a goose that is laying a golden egg by fighting digital music rather than […] understanding and joining it" (Bricklin, 2005, p.6). While the music industry initially reacted poorly—like their entertainment industry counterparts—to the introduction of new products, they still have time to correct their mistakes and take the digital medium further.

3.1 Current State of the Digital Market

> *There were 38,857 albums released last year [2004]; 7,000 from the majors and 31,857 from independents. Out of the total releases, only 233 sold over 250,000 units. Only 437 sold over 100,000 units. That's 1 percent of the time for the total recording industry that an album even returns any significant sales, much less profit. Fortunately, when it hits, it can hit big. That's what goes to fund the next round of investments to develop and nurture new artists.*
>
> *~Martin Peitz*
> *"An Economists Guide to Digital Music"*

Let's consider some statistics. In 2005 alone, about 420 million tracks were downloaded globally (or approximately 6.4 million a week), up more than 20% from 2004. When combined with mobile phone downloads, these two new distribution channels brought in an estimated $1.1billion in global sales in 2005, tripling the value from 2004. And, there is expected further

growth in 2006 (IFPI, 2006, p.3). Just in the U.S., estimates indicate that downloads and subscriptions (not including mobile phone content) will be a $1 billion plus business by 2007 (BBC, "The Digital Music Revolution", 2004). Additionally, by the end of this year, there will be over 43 million broadband households in the U.S. and an almost equal number of digital audio players in the market (Macklin, 2004, p.2).

FIGURE 1: THE U.S. DIGITAL MUSIC MARKET

US digital music market – the key figures

	2004	2005	Change
Broadband lines (M)	34	43	26%
Single tracks downloaded (M)	143	353	147%
Album downloads (M)	6	16	193%
Mobile subscriptions (M)	163	174	7%

Sources: PointTopic-IFPI, Nielsen SoundScan, PWC

(IFPI, 2006, p.5).

As Figure 1 above indicates, broadband has reached deep penetration, with 43 million lines in the U.S. alone, and downloads are skyrocketing, single track downloads seeing a 147% increase from 2004. In fact, 2005 was the first year that sales of these singles began to regularly offset the decline in full album sales (Leeds, "When All the…", 2006).

3.2 ALTERNATIVE DIGITAL REVENUE STREAMS

> Sellers should focus on enhancing the digital consumption experience and not on trying to digitally recreate their physical products. For example, the right to play one's purchased digital music files on multiple authorized rendering devices (enhancing the digital experience) is likely to have a higher positive effect on pricing than the right to burn these music files on a CD (replicating the physical good experience).
>
> ~Gal Oestreicher-Singer
> "Digital Rights and Wrongs"

By this point in the evolution of the digital market, the industry has realized that the internet and digital music offer unprecedented opportunities that need to be optimized for the

industry to recover. As Kusek states, downloadable music has given the music industry a "turbo-charged version of tape-swapping," (Kusek, 2005, p.42). It has given them an opportunity to promote more music than ever (unlimited shelf-space) at minimal expenses, almost circumventing (or perhaps supplementing) Clear Channel stifled radio airplay and MTV monopolized video play, allowing something fresh to penetrate the market. The internet has created an avenue to additional sources of revenue for the music industry. As Kusek states:

> Finally, there is a way to reach a huge audience nearly for free with whatever music you have to offer. As the saying goes, the rising tide will float all boats. Those who try and stop it will be washed overboard in the floodwaters, never to be seen again. Those who learn to ride the rising waters and navigate the flowing current will be carried onto a better world where artists and fans of music can connect more fluidly (Kusek, 2005, p.105).

The future for the industry holds a lot of possibilities, but many potential downfalls as well. Those that learn to embrace and harness the new technology optimally will be shaping the music of the future, but those who do not adapt will be left asking, "What went wrong?" When industries are forced to face extremely painful and sometimes counterintuitive changes, established companies often whither away, leaving room for more agile entrepreneurs.

There are various strategies on how to optimize digital music. Many of these strategies are explored below. And while one may standout to lead the market in the future, I believe that it is a combination of a few of these strategies that will optimize the new digital market for music. The strategies I will explore are:

- P2P Regulation
- The Mobile Phone Market
- Streaming Music
- Bundled Downloads
- Timed Releases
- Collective Licensing
- Artist/Label Relations
- E-Labels

Ultimately, the company that can offer "as much music, in as many ways, to as many consumers via as many formats and distribution channels as possible [legally]" will set the bar for the digital music revolution (IFPI, 2006, p.3).

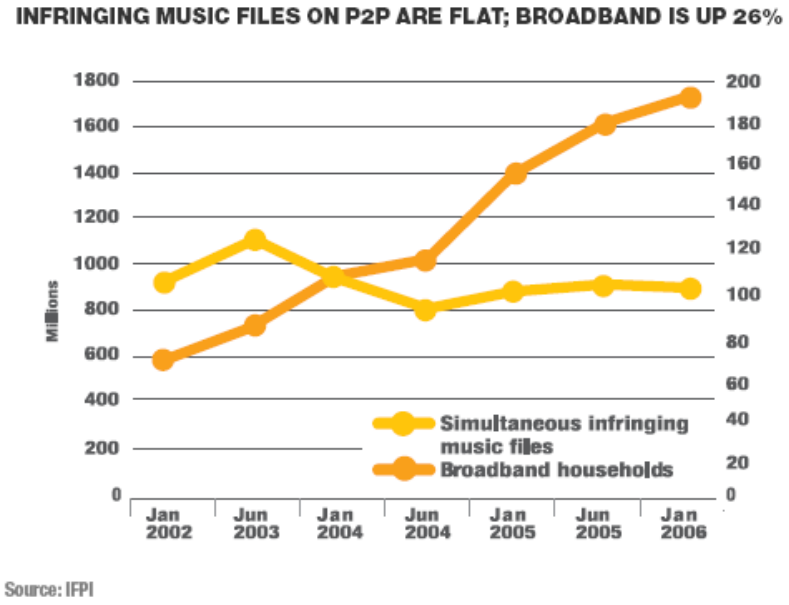
3.2.1 P2P REGULATION

> *What this personal piracy does is it effectively shifts the wealth from the creators, producers and distributors of the music who are the rightful owners, to the hardware and firmware manufacturers who make the recordable and rewritable CD-ROM drives and the CD-ROM and CDRWs. […] By allowing business models based entirely on the theft of artist' copyrights we are starving the host and feeding the parasite.*
>
> *~ Richard Burgess*
> *The Art of Music Production*

> *As with many previous technologies, it can be argued that P2P networks today are expanding consumers' experiences with music to yet another, higher level. Just as the industry ultimately benefited financially from radio, the cassette, and other disruptive technologies, the industry will certainly find a way to financially benefit from P2P—it is inevitable.*
>
> *~ David Kusek*
> *The Future of Music*

Two thousand and five was a landmark year in the industry's fight against P2P networks; between June and September, judgments against Grokster in the U.S., Kazaa in Australia, Soribada in Korea and Kuro in Taiwan formalized the fight against illegal P2P distribution. All of the above-mentioned cases determined that, "Operators of unauthorized P2P networks, who encourage the use of their networks for copyright infringement, can be held liable for music piracy" (IFPI, 2006, p.18). Additionally, the industry's fight against individual downloaders has seemed to instill fear (lawsuits), annoyance (corrupted files), or knowledge (education on copyright law) into enough people to combat the growth of P2P networks. The figure below illustrates an interesting P2P phenomenon; while broadband penetration has been growing steadily over the past two years, illegal file-sharing has been kept in check.

FIGURE 2: THE P2P MARKET



(IFPI, 2006, p.21).

While the industry has met some success in combating illegal file-sharing and distributing royalties equitably (Digital Rights Management[3]), regulation cannot be their only action with regard to P2P networks. File sharing is a great device for consumers to test and experience new music, as has always been available on listening kiosks or on the radio. As Mark Katz states in his book, *Capturing Sound: How Technology has Changed Music*, "MP3 and P2P are influential not because they are good or bad, but because they provide radically new ways to experience and disseminate music" (Katz, 2004, p.187). The industry's next step in furthering this market legally is to gain effective cooperation from the Internet Service Providers (ISPs) in combating illegal usage. The ISPs gain huge indirect revenues from digital music popularity and should have a role in protecting copyright laws on their networks. As stated in the IFPI 2006 Digital Music Report, "As creative content industries—first music, then film and video, news media and publishing—drive the growth of businesses on the internet, ISPs must share

[3] Digital Rights Management (DRM) is the umbrella term for new software rights distribution. DRM helps to recompense the many rights holders involved in digital music.

responsibility in a business where they increasingly generate revenues of their own" (IFPI, 2006, p.18).

While the music industry has been successful in the first phase of the P2P game, regulation, they are currently entering phase two, effective utilization. By getting the ISPs on their side, the industry will be able to garner support and gain knowledge about the new digital reality of commercialized, legal P2P networks, thus increasing revenue streams.

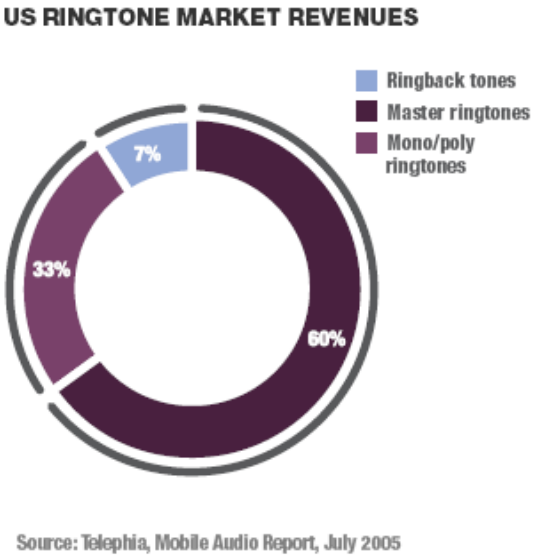
3.2.2 The Mobile Phone Market

While ringtones and ringbacks do not make much sense from an artistic point of view, they certainly offer a profitable revenue stream. The ringtone business currently accounts for about 40% of the total digital music business and is expected to grow to $6 to 7 billion in revenues by 2008 (Kusek, 2005, p.70). Not only does this business have a successful pricing strategy, it also offers a favorable means of payment. Consumers shell out about $1.99 to $2.50 for each ringtone—a ten-second, poor quality sound sample—as opposed to $.99 for full single downloads. Consumers are charged more for a sonically inferior product. Why is it that mobile downloads bring in more money on a per download basis? This odd discrepancy is partly due to the payment structure for mobile ringtones. Because payment is processed through an existing billing relationship between the consumer and the mobile phone provider, the incremental cost of a ringtone does not register too sharply with consumers. However, with digital downloads, there exists no longstanding billing relationship and usually a cumbersome registration process which discourages consumers from impulse or infrequent buying. Another factor that differentiates ringtones from traditional digital singles is that ringtones are a strong symbol of consumer personality. Because ringtones are very public—even when sitting in class, it is not uncommon for Fifty Cent to chime in with "Candy Shop" every once in a while—they are a very clear

personification of the consumer; they are a manifestation of personality. For this reason, some consumers place a higher value on ringtones rather than digital singles.

In addition to these current advantages that the mobile phone market holds over the traditional downloadable music market, the mobile phone market is also progressing in technology much more rapidly than its counterpart. For instance, 2005 was marked by the introduction of the master ringtone (a sonic clip sourced from master recordings), and 2006 will see wider implementation of full track downloads and the 3G technology, which allows for high-speed data transmission, greater voice capacity, access to multimedia features (audio and video) and internet access.

FIGURE 3: THE U.S. RINGTONE MARKET



(IFPI, 2006 p.11).

The above figure breaks down the current U.S. market for ringtones and demonstrates the overwhelming popularity of the master ringtone.

The growth of the mobile market cited above is a clear indication of the importance of user friendliness; when it becomes easy to download legitimate music, people will be willing to

pay. The ringtone industry has set the tone for the music industry in terms of technological adaptation and success, and will continue to see growth with the adoption of full track downloads and additional premium content. While ringtones are not "real music" at this point and cannot be heard in "optimal listening conditions," they do offer an extremely profitable and wholly unique revenue stream for the music industry.

3.2.3 STREAMING MUSIC

Online streaming music services, while small in popularity in comparison to digital downloading, do deserve a bit of attention because of their early introduction to the market. Streaming music was one of the music industry's first attempts at legal digital content. While streaming music is declining in popularity right now—mainly because of rivals in the satellite radio industry and limitations on listening format—it does serve a purpose for some listeners. In fact, the crux of streaming music, unlimited digital content, is the key to a new industry theory that will be discussed further in the section titled, "Collective Licensing". While streaming music will play a role in the future of digital music, it will only cater to a small, niche market.

3.2.4 BUNDLED DOWNLOADS

Some digital music advocates like to point out the quick rise in digital album sales (up 190% from 2004, to 16.2 million) and the unprecedented potential of bundled digital media products. As Richard Burgess says in his book, *The Art of Music Production*: "Once it becomes standard practice to package digital downloads with substantial metadata—including artwork, images and extensive notes, with a choice of compression schemes and digital media players that can play audio, video, and text—it is hard to imagine why anyone would want to buy a CD" (Burgess, 2005, p.263). Given these encouraging statistics and predictions, one might imagine

that there is a market for bundled digital music products; however, others (myself included) would argue that a traditionally bundled product (as described above by Burgess) is far more attractive in its tangible form than in its digital form. Bundled products such as full digital albums, or enhanced products (added music videos, interviews, artwork, ect.) attract a very particular consumer, usually a devoted fan or music junkie. If a consumer believes in an artist enough to shell out $10, they are probably going to want to hold and display their purchase rather than simply enjoy it on their desktop or iPod. This "fan" phenomenon is demonstrated most starkly by the makeup of the digital market. The single—the digital world's bestseller by far—does not attract avid listeners of an artist, but instead, caters to the "in-the-moment listener". Consumers interested in the value added benefits of bundled products are not shopping for their favorite artists online. The statistic on digital album sales cited above, while staggering in percentages is far less impressive in real numbers; compared to the 800 million albums the industry sells per year, digital album sales are almost inconsequential.

As Catherine Moore, Director of NYU's Music Business Program said in our interview on the topic, "Digital bundling can't survive by simply replicating CD attributes. [Digital technology] doesn't lend itself well to direct replication; it has many more opportunities and really can't replicate a majority of the attributes of a real CD. The industry has to rethink what the customer is getting from digital music" (Moore, 2006). As Moore hints, there is a potential market for digital music beyond the singles scene. Where digital can exploit its attributes is in its flexibility. Digital technology offers the opportunity to bundle media products across sectors (i.e. live performance, film, or video game combos) and provide unprecedented speed to market. For instance, a band performing a live show can have a unique, live performance digital product for sale only a few hours after they have cleared the stage. It is in these sorts of promotional and

exclusive content products that digital bundling has potential; however, as stated above, direct digital replicas of tangible products will not flourish because they cannot offer the attributes that album purchasers demand.

3.2.5 TIMED RELEASES

With so many different formats of music available—ringtones, digital singles, digital albums, illegal copies, and full fledged CDs, to name a few—the timing of format releases has become an important consideration for labels to explore. In terms of label activity, the verdict is still out on an optimal structure. A few labels, including Island Def Jam, prefer to suspend the availability of digital copies of singles and albums until the tangible album is released. For instance, recently Island Def Jam restricted the availability of digital copies of Ne-Yo's hit single "So Sick" until the album was in stores. Their strategy was met with explosive success. Fans' pent-up demand for Ne-Yo's products led to release day sales of the album hitting 301,000 and release week sales of the digital single reaching 120,000 downloads according to Nielsen SoundScan (Leeds, "Labels Halt…", 2006). The label also followed a similar strategy for Mariah Carey's "Limited Mimi" album, waiting almost a month after the tangible album release date to make digital albums available online. Again, they were met with huge success for the album.

Island Def Jam, among others, follows this strategy because they feel that $.99 downloads are cutting into their overall album sales and hurting albums of consistent quality throughout. As Steve Bartels, COO of Island Def Jam, said, "If you know you have something of depth, you have to be careful about how you bring it into the marketplace. We're in the business of having consumers believe in an artist. If everything is up and gone before you have a chance to listen to the album, what do you have?" (Leeds, "When All the…", 2006).

However, many experts are questioning this timed release strategy. As Leeds points out, "Holding back on new singles now […] may end up doing more harm than good in the long run, especially if music continues to be available on free, unauthorized online networks" (Leeds, "When all the…", 2006). By not taking advantage of every possible outlet, labels maybe shooting themselves in the foot. The music is out there, and if labels are not giving consumers the opportunity to purchase their music legitimately, they may effectively be encouraging people to download illegally. Rather than providing ubiquitous access, the labels may be effectively strong-arming the market and creating artificial scarcity.

Are labels then effectively telling consumers which albums they truly believe in by choosing certain release schedules? This remains to be seen because different labels approach timed releases differently but in the future, the release schedule of an album may tell consumers something about the quality of the overall product.

3.2.6 COLLECTIVE LICENSING

Many industry experts have suggested that collective licensing will be the solution to music piracy. The collective license, if implemented, would take the form of a small monthly fee, or tax on ISP services for which consumers would then be afforded unlimited access to digital music. This approach would create a central pool of money for artists to be paid from, similar to compulsory licensing used in distributing mechanical licenses for music played "on the radio, in restaurants, stores, elevators, and in shopping malls as background music" (Kusek, 2005, p.131). Rather than sue people to change behavior, collective licensing would simply tax everybody at the primary point of access. This theory rests on the fact that *all* ISP customers would gain enough utility from digital music to be willing to pay. As Kusek states, the access has

to be "so compelling that everyone considers it a part of their basic expenses, like the phone bill, cable television, or car registrations" (Kusek, 2005, p.16).

This concept of collective licensing is not new to the entertainment field; in fact, it is the standard for most European broadcast television industries. As Kusek states:

> In some European countries, such as Germany and Austria, all residents that have television or radios in their homes, regardless of how or whether they use them, must pay a yearly flat fee to the government. The government then uses the funds to pay for public television and radio productions. […] People pay an average of $100-150 per year in return for what feels like a free, unlimited, and unmonitored supply of media programming (Kusek, 2005, p.10).

Despite collective licensing's success in other entertainment sectors, many music industry specialists doubt its potential for success in the digital music field. One of the strategy's biggest critics is Universal Music Group's Jeff Bronikowski. In our interview on the topic, Jeff raised many strong points that argue against the future success of ISP collective licensing. First, and most importantly, the economics of the endeavor do not add up. The figure below runs through the financials of the proposed collective licensing arrangement. If households were charged $5.00 per month for unlimited access, the music labels would receive $2.75 per month from each household after percentages were removed for the relevant players listed below. This would add up to about $33.00 per year from each household. Given the variable margin of a CD, assumed to be about $5.00 in the example below, and the estimated number of units sold in the U.S., the labels bring in about $3 billion dollars a year. For this number to be replicated using the collective licensing system, 91 million households would have to pay the $5.00 tax on ISP service. However, as the last two lines point out, there are only 60 million internet homes in the U.S., and only 34 million of them have broadband access (2004 estimate). As becomes obvious from Bronikowski's illustration, economically, collective licensing cannot work.

FIGURE 4: THE ECONOMICS OF LICENSING

The Economics of Collective Licensing (U.S. only)

Gross per household	$5.00	
ISPs	(0.50)	-10%
Music Publishers	(0.75)	-15%
Artists	(1.00)	-20%
Net to Labels / month	$2.75	
Net to Labels / year	$33.00	
Variable Margin from CDs	$3	Billion (600m x $5/unit)
# of Homes Required to = CDs	91	Million
# of Current US Internet Homes	60	Million
# of Current US Broadband Homes	34	Million

(Bronikowski, 2006).

In addition to the economic barriers to collective licensing, Bronikowski also points out some very practical challenges to implementation. First, since the system could not be opt-in, but only compulsory, people who do not use digital music would most likely object to additional taxes. For instance, my Dad barely knows how to open a browser page, but pays for internet access so he can occasionally email his children. He would not be very open to a compulsory tax for something that he has no idea how to operate and no interest in exploiting. Second, ISPs would likely object to adding costs to their product despite their potential gain. The ISPs are fighting for revenues as well, and may not be so open to raising their prices, even if it all their competitors do so as well. Third, unlike its peer in European broadcast, the proposed collective license on ISPs cannot be limited to one type of media. For instance, if music is included in the licensing, are movies, games, software, or even pornography included as well? All of these concerns raise practical and significant barriers to a collective license.

Third, Bronikowski raises the point that collective licensing caps revenues and effectively removes incentives for artists and labels to be creative and shoot for a number one hit. Because the pool of available music would be so large, an artist would have to be downloaded an incredible amount of times to equal the sales of 100k-250k CDs. As the figure below describes, with approximately 36 billion downloads per year, labels would have a margin of about $.08 per download (given approximate 2004 margins of 3 billion per year on CD sales). The small margin per download would require artists to be downloaded 6 million to 15 million times to reach sales equivalent to 100k-200k CDs. This huge number favors large catalogs and disincentives artists and labels from doing anything new.

FIGURE 5: CD VERSUS DOWNLOADING MARGINS

CD vs. Download Margins (U.S. only)

Estimated CURRENT annual illegal US P2P downloads	12 billion
Assumed multiplier for widespread adoption	300%
Estimated FUTURE annual 'licensed' US P2P downloads	36 billion
Label margin per download ($3B margin / 36B downloads)	0.08
CD variable margin	$5.00

	Physical units sold			
	100,000	250,000	500,000	1,000,000
Equivalent P2P downloads	6,000,000	15,000,000	30,000,000	60,000,000

(Bronikowski, 2006).

While some may argue that Bronikowski's numbers are biased because he assumes a complete replacement of tangible music, even accounting for a potential surviving tangible music market, the numbers still do not add up in the labels' favor.

Bronikowski's arguments undercut the idea of collective licensing based on ISP taxes; however, there are other options for collective licensing. Perhaps another, more appropriate avenue for collective licensing could be a tax on digital media and media players such as CDRs,

iPods, and CD burners. This tax would again create a pool of money, but would also target specifically those customers who use digital music. This structure is more equitable because it is opt-in and only affects those individuals taking advantage of digital music. In fact, this structure is currently being used to some success in Canada and Japan. And while this type of tax may only create a relatively small pool of money, it too would not kill the tangible music market as the ISP tax would have because the music in the second scenario still has to be paid for (or stolen) on a piecemeal basis.

3.2.7 ARTIST/LABEL RELATIONS

The top ten percent of artists make money selling records. The rest go on tour.
~ Unkown

Traditionally, record labels have played the role of marketing expert, production specialist, and sugar daddy, all in the effort to sell albums. However, with the increased availability of cheap recording technology and marketing and distribution outlets, many artists are questioning the role of traditional music labels. With the advent of software and internet technology, anybody's music can sound professional and be accessed around the world at very little to no costs to the artist.

Additionally, with traditional artist/label contracts, in which the label basically owns the artist's content and makes their money on album sales not the artist's overall success, many are questioning whether the two parties' interests are aligned and appropriate for the changing world of music consumption. As Kusek cunningly states, "The common contention that the music companies actually represent the artists…is, in most cases, a far cry from the truth. Ownership of the artist, or their intellectual property, may be a better term to characterize the record label/artist relationship. […] This plantation-style proposition ("You work—I own") is an insult to today's artist, and it is being rapidly abandoned in favor of a more balanced approach that marries the

convenience and value of digital music with the consumers' hunger for music, in a way that actually makes sense for tomorrow's artists and fans (Kusek, 2005, p.52 & 32). In order to remain relevant, the record label of the future will have to be active in the overall success of the artist, including roles in artist management, publishing, touring, merchandising, as well as recording. This change will shift the artist/label relationship from "owning" to "sharing" and will allow for common goals and incentives, not to mention, the label's hedge against declining CD sales. In effect, the label will be firing from all cylinders.

There have already been a few notable examples of this movement towards greater involvement and alignment. Interscope Records recently signed a deal with The Pussycat Dolls that includes the sharing of profits on touring, ringtones, and a line of cosmetics, to name a few. Other deals include Warner Music's negotiation with My Chemical Romance, and EMI's deals with Robbie Williams and Korn. All of the above deals shift power and creativity back to the artist, incentivize all pertinent parties to work together towards common goals, and take a longer-term approach to an artist's success. These types of "all encompassing" deals also greatly hedge labels' against stagnant or falling CD sales.

The traditional role of record labels is changing rapidly, and beyond their customary functions as filter (lending credibility to artists), marketer, producer, and sugar daddy, the labels of the future will be more deeply aligned with the overall success of their artists across multiple mediums including recording, publishing, touring, merchandising, sponsorship, and other activities.

3.2.8 E-LABELS

Another interesting label innovation currently being experimented with is the E-label. E-labels such as the independent Protest Recordings and Warner Music Group's Cordless

Recordings, are based and operate strictly online, only producing digital media, no tangible products. Their products are distributed as MP3s available globally via online retailers and their own private distribution channels (BBC, "The Digital Music Revolution", 2006). This label structure allows artists to release music much more quickly and regularly at minimal costs, mimicking the singles structure of the '60s and '70s in which artists released new songs almost every 6 to 8 weeks. This structure also allows labels to take chances with a greater variety of artists because of the smaller amount of funds necessary to launch a group digitally (no manufacturing and distribution costs to name a few). However, as Catherine Moore points out, these e-labels seem to be a stepping stone, not an ends in and of themselves. For instance, Cordless offers Warner an inexpensive "testing period" with which to judge an artist for a longer-term traditional relationship.

While it remains to be seen if e-labels will become full blown, legitimate labels and not simply a novelty or means to an end, they are certainly offering artists and labels increased flexibility and creativity.

3.2.9 Conclusion on Digital Alternative Revenue Streams

In my opinion, the industry's optimal strategy for digital music distribution encompasses many of the proposed strategies above. The industry will not be limited to one digital medium, but instead will utilize many techniques to reach the customer ubiquitously while still protecting their licenses. For instance, the mobile phone market will be a significant revenue and growth generator in the future, and the changes to artist/label relations will create better incentives for both parties and therefore lead to more innovation. I will go into more depth on this topic towards the end of the paper after I investigate the role of tangible music.

4. PRIMARY RESEARCH

In order to determine the impact of the above discussed industry trends as well as the utility of tangible music in the student demographic, I conducted primary research on students at various schools (principally NYU). My primary research consisted of one focus group and one multiple university survey. The details of the research are contained below.

4.1 FOCUS GROUP

4.1.1 OVERVIEW

The purpose of the pre-survey focus group was to hone the survey questions and structure, gain deeper insight into music consumption patterns, and assure that the survey was inclusive. The focus group was unfiltered, meaning that subjects were not chosen based on any specific variables concerning music consumption. I structured the focus group in this manner in order to gain insight into a wide variety of music consumers.

4.1.2 PROCEDURE

I selected seven personal acquaintances to participate in the unfiltered focus group. I mediated the hour-long session (held on January 25, 2006) with scripted questions but allowed conversation among the participants to develop freely as well. Below are two sample questions with related subsets.

Have you purchased a CD recently? Last week? Month? 3 Months? 6 Months? Year?
- *Did you buy it on the internet or in a store?*
- *Why did you purchase over download?*
- *Was it an artist you already were familiar with?*
- *Do you carry your CDs or do you burn them onto your computer for an MP3 player?*
- *How do you feel about downloading music for free?*

Do you download songs? For free or purchase?
- *Have you ever had problems downloading?*
- *Do you worry about the legality of it?*

- *Do you generally download singles or albums?*
- *Do you listen to songs in the order they are on an album?*
- *Do you think that if CD prices were lower you would buy more CDs?*
- *What about favorite artists? Do you buy their CDs?*
- *Have your musical tastes changed or expanded since being able to download?*

4.1.3 SUBJECTS

I chose to focus my studies on college-aged students (primarily between 18 and 23 years) because they are one of the industry's most lucrative demographics. Not only is the college aged demographic a huge tastemaker for the industry, but it is also on the cutting edge of technological advances (and has high speed access in the dorms). Also, they have the time to invest in a wide variety of entertainment activities. Additionally, this group has the means as well as the access (credit cards) to pay for their entertainment. As has been cited many times in industry critiques, the biggest problem with online purchasing is that kids do not have the means to pay for it. (It is the very kids under the age of 18 who cannot get their own credit cards who are the most likely to be interested in downloading single tracks.) The college aged demographic combines all of the attributes that the music industry values most: interest, time, and ability to access (both technologically and monetarily).

With regard to the focus group specifically, the participants included two females and five males. All of the participants were either Juniors or Seniors from three different NYU schools. One participant attended Steinhardt, two CAS, and four Stern.

4.1.4 RESULTS

The focus group allowed me not only to refine the survey structure and content, but also to gain valuable new insight into motivators for music consumption. Below are selected excerpts categorized into relevant topics:

Artistic Content

- **MC:** Yeah, if I really like an artist, I'll actually go out and buy albums even if I already have them [downloaded].
- **JM:** Loyalty to the band definitely makes me buy [as opposed to downloading].
- **DG:** For me, albums tell a story and you don't get that story when you buy "Greatest Hits". If you really want to saturate yourself with an artist and get to know an artist, if you know the "Greatest Hits" you don't know anything about that artist; you just know what songs might show up on a TV show or at a bar.

Visual Art

- **JM:** I look at this cover [RH Factor album insert] and I see a lot of color so I think the music would be very creative and I don't think you'd be able to download it and appreciated it as much without the cover [album insert].
- **MC:** It's [the insert and jewel case] like part of the thing of owning a CD, you have like a nice collection and shit.

Displayability

- **DG:** It's just like one of those things you do when you have a new friend or you're going to your friend's apartment for the first time. If they have their CD shelf out, you go over immediately and judge them. One of my close friends who had never been to my apartment was like, "Alright, let's look through your CDs."
- **DG:** It [displaying CDs] was like really cool in middle school, then it lost its appeal.
- **MC:** iTunes works really well now. People kind of just look through your iTunes now to make their judgments.
- **AO:** DVDs are more prominently displayed now than CDs. Like if people have *Scarface* and *Godfather*, they just put it out there.

Safety (Perceived Permanence)

- **AY:** I want the physical item, because what if your computer crashes and you lose everything?

Pricing

- **KT:** What if CDs were $5-6? Would you buy more?
  MN [in response to KT]: Oh yeah!
  MC [in response to KT]: I would buy so many! I would start buying CDs like wild.
  DG [in response to KT]: Definitely.

Alternative Entertainment Products (Competition)

- **MN:** I mean, I used to display CDs, now it's just movies.
- **KT:** So do you guys buy things like DVDs?
  DG [in response to KT]: DVD buying has replaced CD buying for me.
  KT: So you would go out and buy a DVD that you've never seen?
  MN [in response to KT]: Oh yeah.
  AY [in response to KT]: When you get it off of Amazon, you can buy it for like $10, only twice the price of renting it, and if you like it, you're going to have to buy it anyway.
  DG [in response to KT]: I think, like we were talking about before, the display value has gone up on the DVD. I mean, I don't think 10 years ago people our age were displaying their videocassettes, but everybody wants to see the DVDs.

Maybe it has to do with all the cool things you can get with a DVD. My friends have contests for how many DVDs they can own and they argue over if they should count box sets as 1 or 4!

- **KT:** Does anybody buy ringtones?
  SG [in response to KT]: I have a thing against ringtones.
  MC [in response to KT]: I've bought two. But they're just not that cool.

Enhancements

- **AO:** The last CD I bought was a special addition, and I bought it because it had the DVD add-in and was still the same price as a regular CD.

Music Retailing

- **DG:** I've actually given up being like, "I have to buy my music from Other Music," I just go where it's the cheapest. I don't give a shit.

Downloading Habits

- **DG:** I actually stopped downloading. It was too much to deal with. Too much time. I would download so much stuff and then never listen to it.
- **MN:** I've been downloading for free less and less as time goes on because I've just found that the quality has been diminishing and availability has been much less because I've been getting into some obscure stuff. It's just much easier to pay the $.99; I mean I'm not going to miss $.99 that much.
- **JM:** You download songs, you don't download albums.
- **AO:** Yeah, [downloading has changed my taste in music]; I started listening to stuff I would have never bought. I would never buy a Jazz or Rock CD, only Hip Hop, but I'd definitely download those types.
- **JM:** I only buy Jazz [and download the rest] because I look for CDs that I can just pop in and listen to all the way through while I do stuff around the apartment. Kind of like background music.
- **AY:** I would prefer to have a CD as opposed to just downloading, but downloading is convenient and free.
  JM [in response to AY]: Not convenient, just free. 85,000 other things will show up when you search for a song.

4.1.5 MANAGERIAL IMPLICATIONS

The focus group allowed me to hone my survey questions as well as gain several unanticipated, qualitative opinions on music consumption. Specifically, without the focus group, I would have never anticipated the "perceived replacement" of CDs by DVDs or the strong price elasticity voiced by a few of the participants. The group also allowed me to go in-depth about motivations for consumption such as convenience, perceived expertise, and artist loyalty.

4.1.6 LIMITATIONS

The focus group, while extremely helpful, was limited by the potential interference of social desirability biases. Additionally, because the participants were simply a convenient sample, they may not have been representative of a larger population. For future research, multiple focus groups, some of which are targeted by music consumption preferences, should be conducted in order to gain further insight and delve deeper into the drivers of consumption patters.

4.2 SURVEY

4.2.1 OVERVIEW

The internet based survey (hosted on Surveymonkey.com) was conducted over a period of 10 days during February 2006. The purpose of the survey was to gain insight into both the prevalence of tangible music purchases as well as the driving factors in both digital and tangible music consumption among a sample student population.

4.2.2 CONJECTURE/PREDICTION

I predict that the market for tangible music will be small but important in the student population and that the small populous committed to tangible music will be fervent in their dedication to the format. In fact, I predict an 80/20 relationship in which approximately 20% of the student population will account for a disproportionately high amount of tangible music revenue. Additionally, I predict that the loyalty of the small population will certainly warrant an argument for the future survival of the tangible music format. Despite capturing only a small percentage of the student market, tangible music will remain strong in a very dedicated, music loving population.

4.2.3 PROCEDURE

Using input from the focus group, I crafted questions to measure music preferences, purchase intent and behavior, and attitudes towards music and alternative entertainment products. I created the internet based survey on Surveymonkey.com and disseminated it to students across NYU and other (limited) universities. The questions varied in format including fill-in, free response, multiple choice, and rating scales. For rating questions, a nine point Likert scale was used to measure agreement/disagreement with opinion statements.

Below are a few sample questions. (A full list of questions and aggregate responses are provided in Appendix A.)

Music Preferences

Please rate these statements.

"I listen to music at least once a day."

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

"My music collection is very important to me."

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

"My friends and I like to talk about music."

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

"I go to live music performances often."

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

Purchasing Intent/Behavior

"Purchasing": Does not include downloading music but instead constitutes purchase of a physical CD from a store, the internet, or mail order service.

Approximately how many compact discs (CDs) do you currently own? ____

Approximately how many CDs do you ***purchase*** a month? ____

When was the last time you ***purchased*** a CD?

- Never
- Less than a week ago
- Between 1 week and 1 month ago
- Between 1 and 3 months ago
- Between 3 and 6 months ago
- More than 6 months ago

Alternate Entertainment

If you were given **$100 per month** to spend on personal entertainment (not including social entertainment such as going out to a movie, restaurant, club, etc.) how would you allocate your budget across the following categories? You can spend anywhere from $0-$100 on a category. Remember, your total must add up to $100.

$_____ DVDs
$_____ CDs
$_____ For-Purchase Downloaded Music (not including ringtones)
$_____ Ringtones
$_____ For-Purchase Downloaded Video (including TV shows, music videos, and films)
$_____ Video Games
$_____ Books (excluding required readings)

4.2.4 SUBJECTS

The survey was disseminated through various university list serves and was aimed at current university students (for reasons discussed above). While the majority of respondents were current NYU students (131), there were several (46) non-NYU student respondents. Other schools represented in the survey included University of Michigan, Penn State University, Wake Forest University, and Westchester University to name a few. The motivation behind opening the survey to other university students was to lessen or eliminate any particular biases that NYU students as a whole may hold. A detailed description of the 186 respondents' demographics can be found in Appendix A.

4.2.5 RESULTS

The survey revealed many interesting attributes of student music consumption. The mean number of CDs owned was approximately 150 per person, the mean hours of music listened to per day was approximately 3.3 hours, and the estimated mean spent on CDs per month was $26. While multiple types of analysis can be performed on the results obtained, I focused my studies on four major areas: analysis of student music consumption patterns and motivations, identification of attributes that differentiate tangible music from digital music, examination of price elasticity of tangible music demand, and investigation of student demand for alternative entertainment products.

4.2.5.1 Student Music Consumption Patterns & Motivations

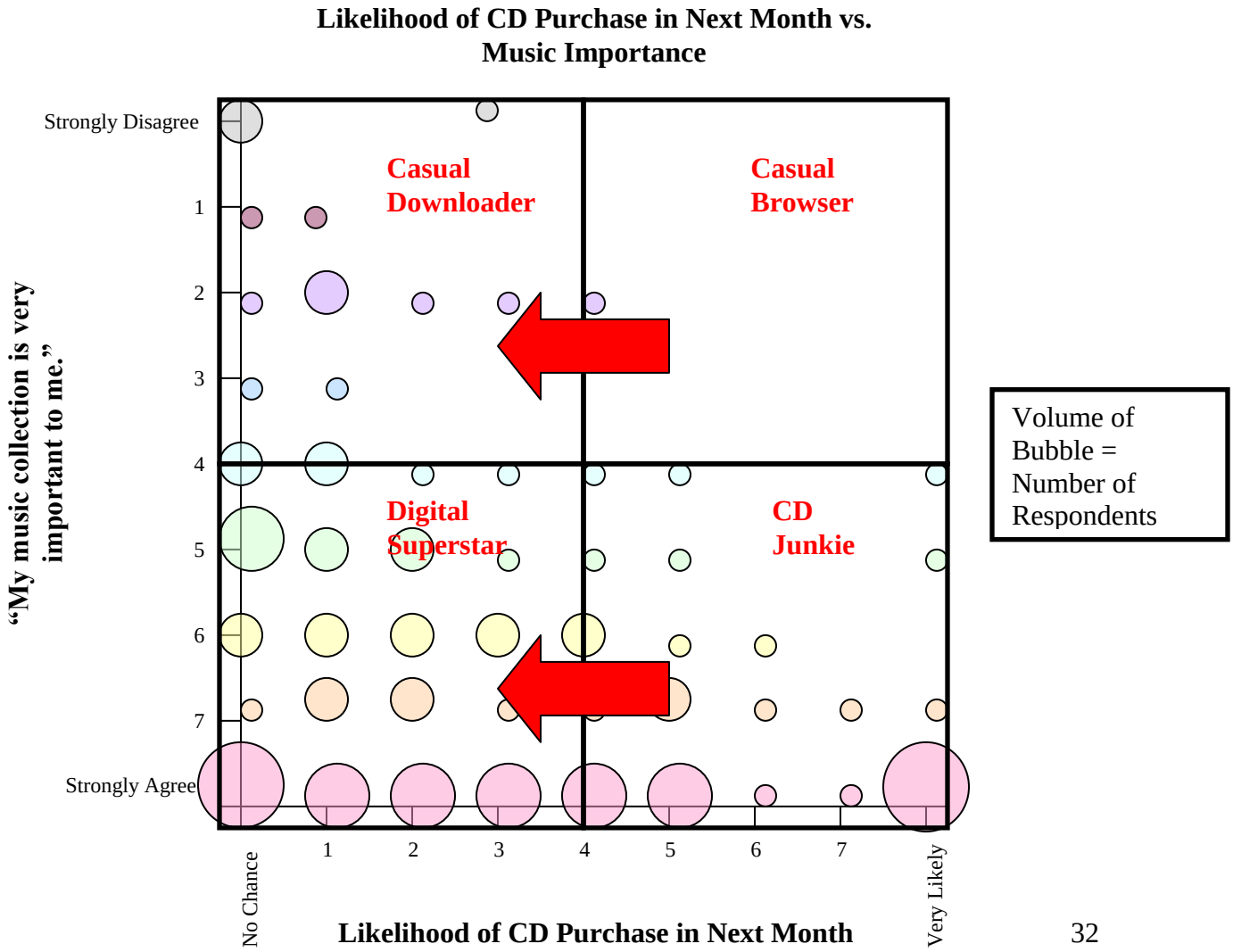
With regard to music consumption patters and motivations, my goal with the survey was to determine who was purchasing/downloading, with what prevalence, and why?

To answer the "who" I first ran single and multiple regressions comparing the dependent variable "likelihood of CD purchase" with independent variables such as age, income, and hours of music listening. None of the independent variables were statistically significant. In fact, all of the tests produced R-squareds that were not statistically significant. To remedy this predictability situation, I created visuals to compare attitudes and purchase intent.

The figure below compares two attitudinal questions in order to determine if importance of a student's music collection is correlated to their likelihood of future CD purchase. The figure is arranged such that the size of the circles indicate the approximate number of respondents in each category; for instance, there were 4 respondents who "strongly disagreed" with the music importance statement and said that the likelihood of CD purchase in the next month was "no chance". (The names applied to each quadrant are simply meant to facilitate reference and only represent rough groupings of respondents.) As this figure interestingly indicates, there is a large population of students who value their music collection and have a low likelihood of purchasing a CD in the next month. I have loosely categorized and termed these individuals "Digital Superstars". Because of this seeming paradox of music importance and lack of tangible purchases, it can be inferred that these respondents are active in the digital music world, utilizing both free and for purchase digital music. The other interesting category that stands out from this figure is the group in the lower right hand quadrant that I have termed the "CD Junkies". These individuals—while obviously less numerous than their "Digital Superstar" counterparts—represent a small but fervent population of music and tangible product enthusiasts. In fact, the

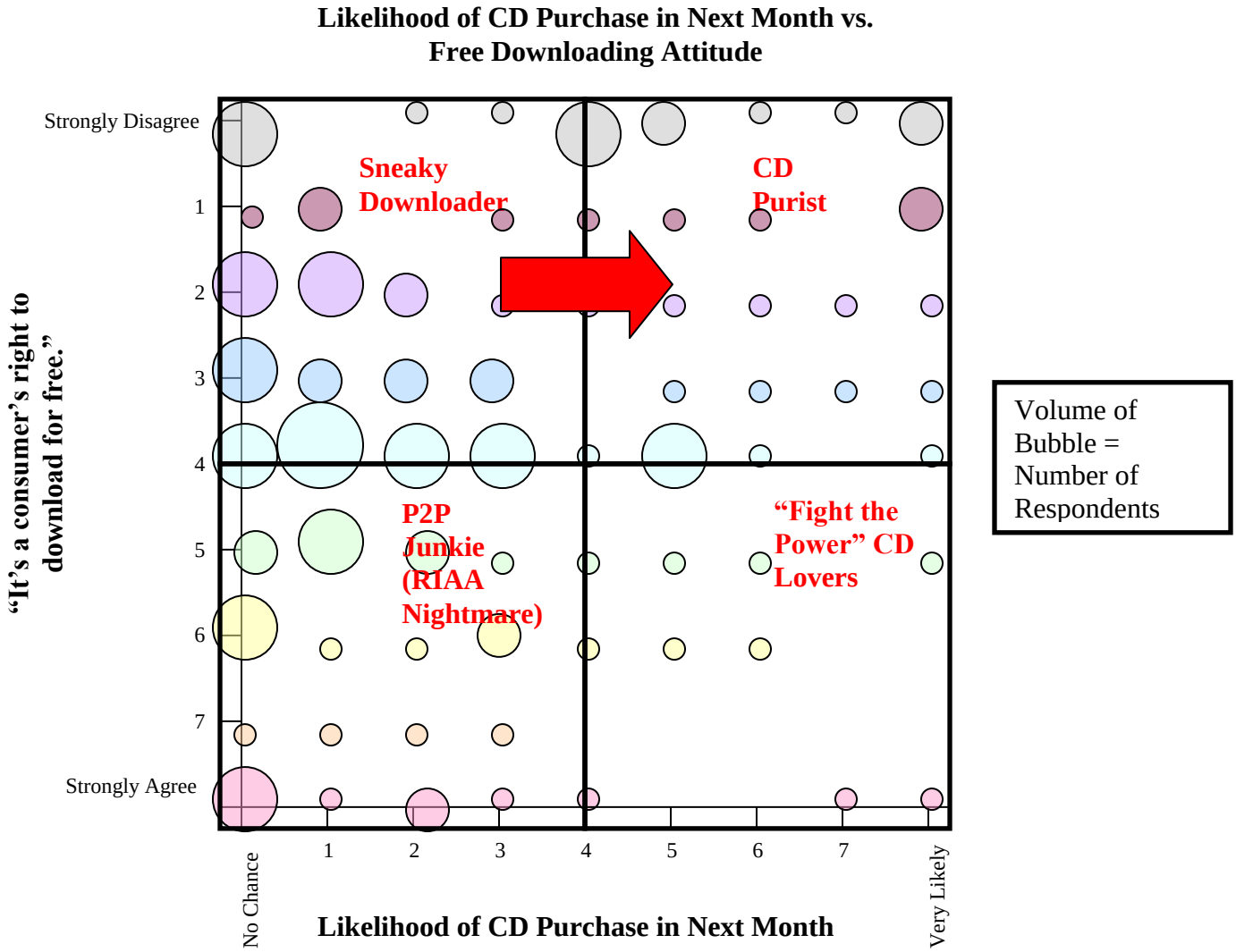
size of the group of respondents who "strongly agreed" that their music collection was important and were "very likely" to purchase a CD in the next month is approximately equal to the size of the group on the other extreme ("strongly agree" and "no chance"). In my opinion, the size of "very likely" purchasers is large enough (and far enough to the right) to legitimize the future existence of a tangible music market among the student demographic. Additionally, (as I have indicated with the red arrows) with the advent of increased availability and quality of digital products, it can be inferred that the tangible market will loose some demand from those consumers on the cusp ("4" in likelihood) but will remain relevant because of the strength of extreme "CD Junkies".

FIGURE 6: LIKELIHOOD OF PURCHASE VERSUS MUSIC IMPORTANCE



In an attempt to further understand the attitudes of consumers, I created a figure similar to the one described above, but plotted respondents' attitudes towards free downloading versus their likelihood of purchase. Here, again, the quadrant names aid in reference and are only rough descriptions of attitudes of the groups. Again, in this examination, the relevance of CD purchasers is considerable, with "CD Purists" making-up almost 20% of the sample. While the fervent CD purchasers are more dispersed in their attitudes toward free downloading than they were in their attitudes towards music importance, their relevance is still felt. Additionally, what this figure lends insight into is the size and strength of the "Sneaky Downloaders". What this indicates—and may contradict the arrows described in the above figure—is that the majority of non-CD purchasers do not feel right about downloading, but do it for other reasons, perhaps monetary constraints or ease of accessibility. This disagreement with the "rightfulness" of downloading may, in fact, lead to a small shift rightward as indicated by the arrow below.

FIGURE 7: LIKELIHOOD OF PURCHASE VERSUS DOWNLOADING RIGHTS



Together, what these two figures suggest is that there is a large volume of student downloaders, the majority of who value their music collections; yet, there is also a small but dedicated population of CD enthusiasts. While I predict that the arrows moving CD purchasers towards digital products are most likely stronger than the arrow moving "Sneaky Downloaders" to "CD Purists", it is still interesting to note the feeling of wrongdoing that many of the downloaders acknowledge.

These two above figures give us insight into the "who" and the "how prevalent", while the next section will touch on the "why". Before moving on to the "why", I would first like to address the "why nots" for CD purchase. The most prevalent (and perhaps the most obvious) reason cited by respondents for not purchasing CDs (and in most cases, downloading instead) was the economic factor, price. A few respondents were quoted as to why price so strongly affects their downloading:

> Lowering the price of CDs is most likely to get me to buy more. I am also willing to buy CDs if the entire CD is amazing, not just one or two songs, so very high quality music would lead me to buy more CDs. The only way I would start paying for downloaded music is if it became impossible to download music for free.
>
> I download illegally because I can't afford all the music I want to hear and I have no other way of learning about different bands and expanding my musical knowledge.

Other often cited factors for not buying CDs and instead downloading music include: availability of rare tracks, lack of enforcement against illegal downloading, and convenience.

This section has touched on the "who", "how prevalent" and "why not" of student music consumption. The following section will delve deeper into the precise attributes that differentiate tangible music from downloadable music.

4.2.5.2 The Utility of Tangible Music

From my study it has become clear that there are perceived differences between tangible and digital music among student consumers. In the below analysis I have categorized some of the most prevalently cited attributes that differentiate tangible products, the "why" of tangible music consumption.

Authenticity

The most often noted differentiating attribute of tangible music is that of authenticity. Authenticity can mean a lot of different things to different consumers. For some, authenticity is the honoring of artistic intent. As one respondent noted, "The album is a complete package;

every song is preserved the way it was supposed to be heard." Another described owning a CD as a "shrine to a favorite artist"; a sign for them to continue in their art.

Authenticity can also mean personal or social validation. One particular respondent description that painted a very clear picture of the importance of authenticity is the following response drawn directly from the survey:

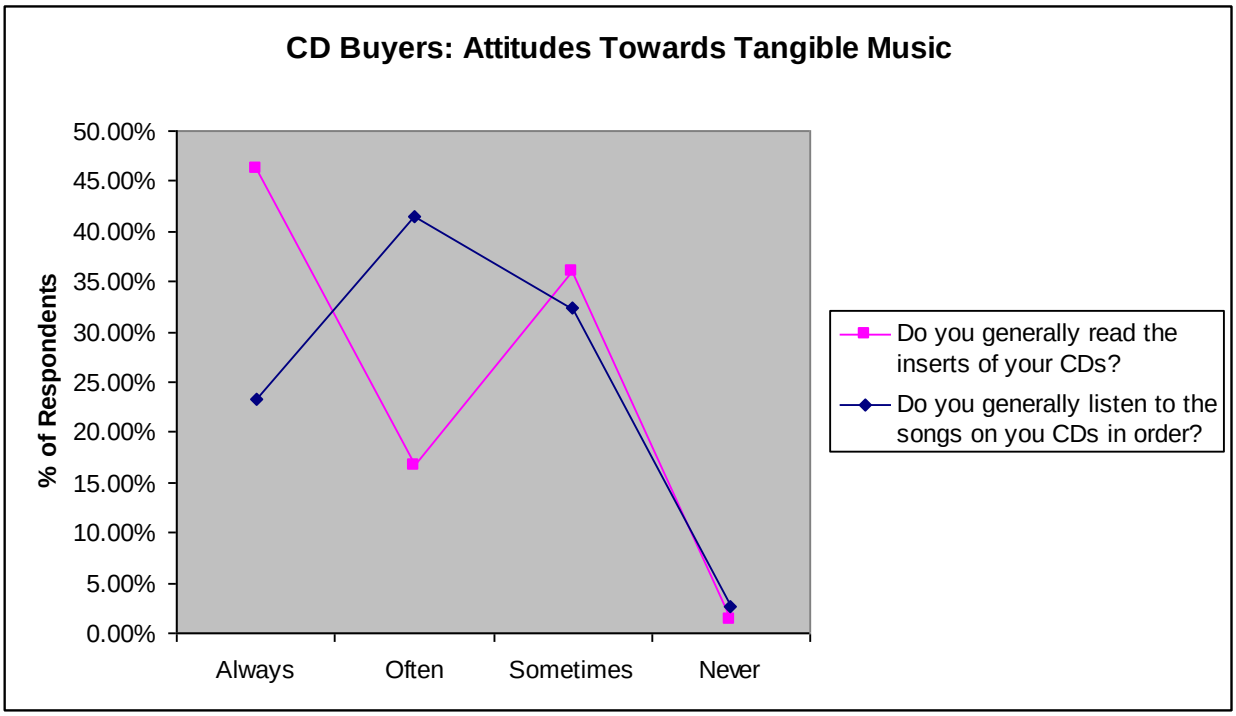
> I don't like popping in the generic blank ugly disc that's scribbled on with a Sharpie; I like having the pretty colored and well-designed disc to put into the CD player so it's like, 'I legitimately pay for my music, biatch!'

For this respondent, the authenticity of the product is a huge motivating factor in the purchase decision. For him, authenticity creates a personal and social validation. Another respondent emphatically stated that, "The original has so much more utility over copies!"

For others, authenticity means experiencing the non-musical features of a CD such as the cover art, liner notes, photos, or lyrics. One respondent noted that, "Creative inserts and continuity through the songs make the whole [the CD] greater than the parts [the individual tracks]." For many consumers, the album represents "a total experience", not simply a sonic pleasure. As one respondent described, CDs represent "originality and sincerity, uncompromised."

The importance of authenticity is also visually displayed below in Figure 8. The questions, listed in the legend on the right of the graph, were only administered to individuals (78) who indicated that they were "likely" to purchase a CD in the next month (a rating of "5" or greater on the Likert scale).

FIGURE 8: ATTITUDES TOWARDS TANGIBLE MUSIC



As these responses show, the "total experience" of both added content and artistic intent are driving factors for tangible music consumption among the student demographic.

Collectability

Many of the survey participants stated that the ability to build a collection of music was critical in their purchase decisions. One respondent noted that he felt a strong sense of pride in every piece that he added to his collection. Another described CDs as "physical artifacts of my passion". For many, collecting was described almost as a hobby; not only is the final product important, but the search and the ability to impress others also play a large role in the importance of CDs. As one respondent noted, "Going to a store and purchasing a CD is more of a meaningful experience than downloading a song." Another noted the feeling they got from "buying, unwrapping, and popping in a CD for the first time."

Some might argue that all of these collectability attributes can be replicated in the digital world with formats such as iTunes. However, as Brown states, "[Collecting digital files is] very

different from collecting physical music objects" (Brown, 2006, p.8). He goes on to describe a relevant study that he conducted: "When we asked our participants about collecting digital files rather than physical music objects they were generally negative, even those who used MP3 files extensively" (Brown, 2006, p.8). As can be seen, collectability creates a unique and valuable differentiating attribute of tangible music.

Displayability

Another important attribute of tangible music, one that partly stems from collectability, is that of displayability. For many consumers, their music expresses who they are; a tangible collection is a presentation of a person's tastes and expertise. While this seems to be a diminishing factor in my focus group and survey respondents, it is still noted often enough to deserve attention. (Perhaps many of my respondents do not display their music because the majority live in cramped New York City apartments.)

Safety (Perceived Permanence)

Perceived permanence is an often-noted attribute that adds utility to tangible music. While neither digital nor tangible music is truly permanent, many consumers feel safer owning a tangible product rather than a digital download. Although hard drives can be backed-up to avoid disaster, often they are not updated frequently enough (or at all) to give consumers adequate piece of mind. One consumer described his perceptions as the following: "I know that the CD will always be there. I've downloaded lots of songs before, then the computer crashed and I lost them all! CDs are much safer." Another said, "I feel much better having a hard copy of the music. What if something were to happen to my computer?!"

Enhancements

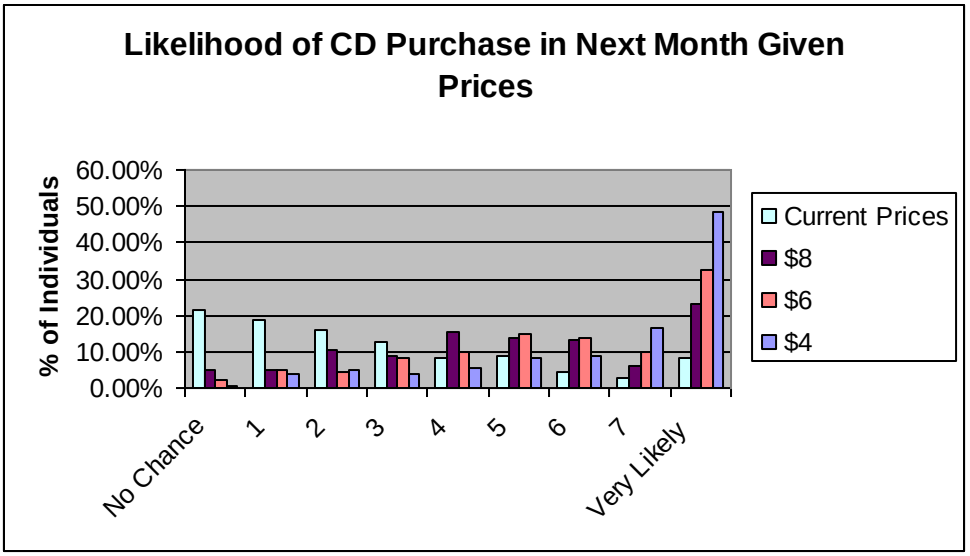
A final often cited attribute of tangible music is that of enhancements. Many CDs offer value added attributes that cannot be found online or downloaded from iTunes. For instance, special edition compilations, DVD content, interviews, or special promotions add value to the tangible product that cannot be replicated with digital music.

All of the above described attributes—authenticity, collectability, displayability, perceived permanence, and enhancements—provide utility for tangible music consumers. All of the attributes are nonreplicable in the digital realm, and therefore create value and differentiate the tangible music market from the digital music market. While the previous section described the "who", "how prevalent", and "why not" of student music consumption patterns, this section shed light on the "why".

4.2.5.3 Price Elasticity of Demand

Another insight that I pulled from the survey results is the importance of pricing strategies. While many in the industry are extremely reluctant to lower CD prices, the results show that the price elasticity of demand for tangible music is very high; consumers are very sensitive to changes in prices of CDs. As shown below in Figure 9, incremental drops in price lead to large increases in intended purchases. (While this type of question cannot recreate the classical interpretation of price elasticity because it measures *intended* purchase behavior, it is still helpful in inferring elasticity.) As can be seen, a price of $8 per CD would greatly increase the likelihood of purchase among students. The change in intended demand in each of the X-axis categories is significant considering the change from "Current Prices" (to be interpreted individually) to "$8" per CD.

FIGURE 9: PRICE ELASTICITY OF DEMAND



It is approximated that a CD costs about $5 to manufacture, distribute and market for a label. The Figure above indicates that if labels were willing to slightly reduce prices, still earning a nice profit on each disc, they would greatly increase demand of tangible music. Even with reduced prices, labels would still be earning higher margins on tangible music than on digital downloads.

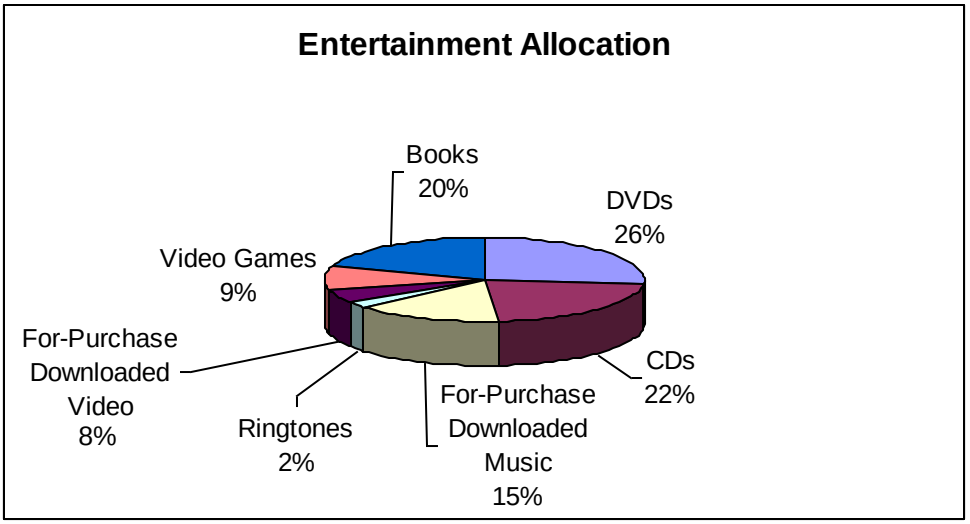
4.2.5.4 ALTERNATIVE ENTERTAINMENT

In an attempt to measure the student consumers' perception of the value of tangible music against similar alternative entertainment options, I asked respondents the following question:

> If you were given **$100 per month** to spend on personal entertainment (not including social entertainment such as going out to a movie, restaurant, club, etc.) how would you allocate your budget across the following categories? You can spend anywhere from $0-$100 on a category. Remember, your total must add up to $100.
>
> $_____ DVDs
> $_____ CDs
> $_____ For-Purchase Downloaded Music (not including ringtones)
> $_____ Ringtones
> $_____ For-Purchase Downloaded Video (including TV shows, music videos, and films)
> $_____ Video Games
> $_____ Books (excluding required readings)

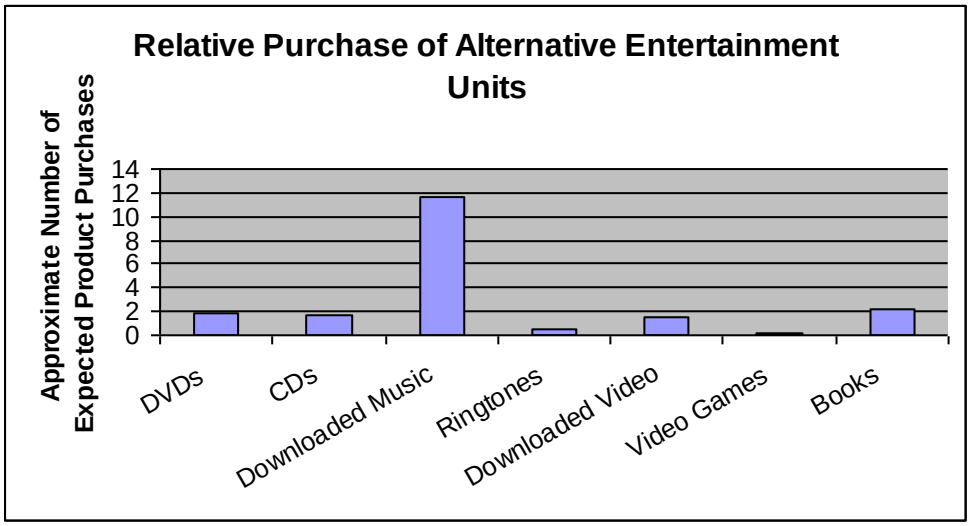
Individuals allocated their disposable income as follows in Figure 10:

FIGURE 10: ALTERNATE ENTERTAINMENT SPENDING



As can be seen, DVDs, CDs and books accounted for the highest percentages of outlay. However, to gain greater insight into the perceived value of tangible music, I created a relative scale based on approximate prices of alternative entrainment products. This scaled investigation allowed me to determine how many units of each product individuals intended to purchase. I used approximate prices of: DVD: $17, CD: $13, Downloadable Music: $1; Ringtones: $2, Downloadable Video: $2, Video Game: $40, Book: $10. The results were as follows in Figure 11:

FIGURE 11: RELATIVE PURCHASE OF ALTERNATE ENTERTAINMENT UNITS



The most interesting interpretation here shows that individuals anticipated purchasing approximately 2 CDs for every 12 downloads, about double the tangible content over the digital, for-purchase content. While this interpretation may be skewed because of the absence of free downloading, it does show that even among an extremely wide variety of consumption opinions, tangible music is still very relevant.

Additionally, these numbers indicate that while alternative entertainment products are pulling a lot from potential tangible music sales, they are not completely wiping out the medium; the relative value of alternative entertainment products is high, but not stifling. The biggest competitor seems to be DVDs, which are extremely popular with the student demographic because of time availability. While many adults prefer to spend their disposable income on music—a less time intensive entertainment product—many younger consumers have the time to devote two full hours of undivided attention to viewing.

The above results of the survey—student music consumption patterns and motivations**,** tangible music utility drivers, price elasticity, and alternative entertainment solutions—all add valuable insight into the tangible music market. All four of the above-described results validate the importance of a tangible music market and also offer insight into potential improvements for the markets.

4.2.6 MANAGERIAL IMPLICATIONS

The above results all lend evidence to the viability of the tangible music market. First, the study shows that there is a small but fervent population of music enthusiasts who value tangible music over its digital alternative (10% of sample who indicated a likelihood of purchase of "7" or higher), similar to an 80/20 effect. Second, the study illuminates attributes of tangible music that add utility to the product. Third, the pricing investigation shows that while there is a market

among the student demographic at current CD prices, improvements in pricing structure would likely greatly increase the size of the market and the strength of the demand. Last, the study shows that while tangible music faces strong competition for student's disposable income from entertainment alternatives such as DVDs and books, CDs still represent an important portion of student expenditures.

All of these factors lend themselves to the viability of a continued market for tangible music among the student demographic. While many pundits are suggesting the disappearance of the tangible music market and the complete replacement with downloadable alternatives, the above described primary research results strongly suggest the future viability of a tangible market. As Burgess states,

> As in all other areas of life, the new technology will not entirely replace the existing ways of doing things but will take its place alongside them. Newspapers and books were not replaced by movies, which in turn were not killed by TV. Radio was modified by TV but not replaced. The Internet has not yet superceded TV and most likely will not. History shows us that new technologies eat away at the market share of old technologies but rarely completely replaces them in the short-to-medium term (Burgess, 2005, p.252).

4.2.7 LIMITATIONS

While I am confident in the process and results of the above-described survey, there are certainly many limitations that could not be avoided given the nature of the research. First, because of the limited time and resources inherent in undergraduate study, I was limited in scope and depth of potential investigation. For instance, it would have been valuable to gather more responses from non-NYU students to avoid potential biases. Additionally, it would have been very helpful to conduct additional, post-survey, filtered focus groups. While I attempted to gather students for these types of groups, response was very low and time limited. Additionally, as is inherent in any survey based study, flaws such as survey fatigue, and ambiguity can affect results.

If given with more time, or a second round of investigation, I would have honed the survey questions further and delved deeper into the motivations for tangible music purchase.

5. The Future of the Music Industry

Drawing from industry opinions and primary research results, I will now explain my prediction for the future of the music industry and explain how tangible music and digital music should ideally interact in the music industry of tomorrow.

With the increasing prevalence of and alternative options in the digital music realm, the world of music consumption is changing rapidly and drastically. In order to survive the evolution of the market, music labels will have to learn to adapt to the new formats, create new strategies, and reassess their business structures. First, I will discuss the role of tangible music in the future of the industry and the outlook for retail stores, then I will conclude with my outlook for the future formats, strategies, and structures of the music industry.

5.1 The Future of Tangible Music

Despite a few expert opinions (and as evidenced in the primary research above), the CD will remain relevant in the marketplace until another tangible alternative challenges its rein. Digital media is simply not an adequate replacement for tangible product but, instead, a supplement.

From the consumer's perspective, the differentiating qualities of both types of products guarantee nonexclusivity and are often why downloaders continue to purchase CDs. As discussed in detail in the earlier section, a few of the attributes of tangible music that create a market for the product include: authenticity, collectability, displayability, perceived safety, and enhancements. As Katz summarizes, "To put it bluntly, people like things" (Katz, 2004, p.186)

and often it is the physical object that people, especially collectors, value most, not necessarily the music. In the context of collecting music, Katz says:

> Collecting is about the thrill of the hunt, the accumulation of expertise, the display of wealth, the synesthetic allure of touching and seeing sound, the creation and cataloging of memories, and the pleasures (and dangers) of ritual. Record collecting represents a relationship with music that helps us, in some part small or large, to articulate and, indeed, shape who we are (Katz, 2004, p.11).

To many, an album is a piece of art; one cannot just buy part of it to experience the full impact of the artist's intent. There are cultural costs to unbundling an album: the loss of artist continuity and the inability to access lesser known music.

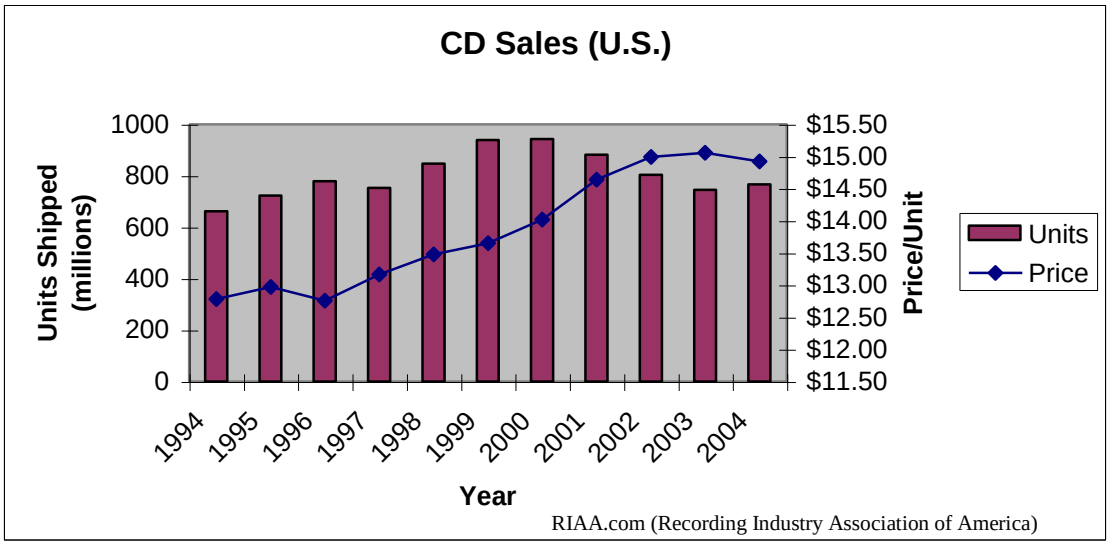
Additionally, digital music is only prevalent for a small (but growing) demographic. Differentiating on age alone—not even factoring in important determinants such as socioeconomic class or geographic location—it is easy to see that digital music is only relevant to a certain demographic of music purchasers. For instance, older consumers who did not grow up in the digital age (age 45+) may not have access to or adequate knowledge about digital downloading. On the other side, younger consumers (18 and under) may not have the funds or the ability to pay (lack of credit card access) for digital music. (This younger generation also may not have access to P2P networks because of parental blocks.) As becomes apparent, the digital market for music is only widely prevalent with a small population. (This is why I concentrated my consumer study on college aged students.) And, even among that population, tangible music is still valued. As the International Federation of Phonographic Industries' 2006 report on digital music indicates, 34% of file-sharers and 37% or about one in three online music purchasers value CDs more than digital music (IFPI, 2006, p.15).

Not only will consumers demand tangible music, but the industry will also encourage the market's stability. From the point of view of the industry, digital music cannot and will not completely replace tangible music in the near future most simply because revenues from the

digital market will not be large enough to support artists and their entourage; with digital music alone, there simply would not be enough revenue to go around. Because the majority of digital music is purchased in the single song format, the labels are only bringing in negligible revenues from each purchase. However, in the tangible market, labels accrue revenues from, effectively "ten singles" at every purchase. Even if a consumer would not have paid $1 each for all of an album's songs, they are forced to shell out $10 for each album, no matter if they ever listen to all ten songs. The industry locks customers into purchasing more than they may actually be interested in. This system allows the industry to bring in much greater revenue in the tangible market than in the digital market even if they are earning equitable amounts per song. For example, to offset revenue lost from falling CD sales alone, downloads would have to maintain a 150% annual growth rate! (And that is just to offset losses, not to completely replace the tangible market!) Even with digital sales at a record high 420 million tracks in 2005 (not including the mobile market) the digital market still only accounts for about 5% of major-label revenue (IFPI, 2006, p.3; Bruno, "Digital Track Sales…", 2005, p.1).

Additionally, despite some negative predictions, the market for CD sales is rebounding slowly. As Figure 12 indicates, U.S. CD sales reached a peak in 2000, but as prices continued to rise and as P2P technology began to proliferate, the industry was struck hard by drastic declines in sales in the following years. In fact, it was not until 2004 that sales began to rebound (5.3% above 2003 sales) as prices dropped and illegal downloading began to face stringent pushback from the industry. This rebound in sales is encouraging for the future of tangible music and it is predicted that sales will settle around this current mark of about 700 million albums per year in the near future.

FIGURE 12: HISTORICAL U.S. CD SALES



RIAA.com (Recording Industry Association of America)

It is in both the customers' and labels' best interest to continue to focus strong efforts in the tangible music market. For the reasons mentioned above, tangible music will continue to be a prevalent medium in the music market.

5.2 THE FUTURE OF RETAIL SALES

While the future of the tangible market remains encouraging, there is one player in the game who will not fare as well. The traditional music store (independents and chains alike), like its label brethren, will have to "innovate or die" in order to survive in a market of heavily increased competition. Traditional music stores are facing tremendous pressure in the tangible music market from big box retailers as well as online merchants, and their future looks to be filled with many challenges. (Even Starbucks sells music!)

The introduction of music distribution to big box retailers such as Best Buy, Target, Costco, and Wal-Mart began in the 1990s as labels scrambled to find revenues from new places. The ultimate impact, however, was a drastic drop in CD prices. The discount retailers were using CDs as "loss leaders"—often pricing products below their actual wholesale costs—in order to attract people to their stores. The result is a loss in profits for traditional music retailers, and a

pricing structure that is unsustainable for competitors. As Kusek points out about discount retailers:

> These giants have come to gain the largest share of the U.S. market today. Wal-Mart alone accounts for approximately 20 percent of all music sold in the U.S. This is an astonishing figure, given that the music selection at most Wal-Mart stores is usually less than 750 titles deep. Neither the individual music store nor dedicated music chains such as Tower and Virgin can compete with this kind of pricing power (Kusek, 2005, p.87).

As Kusek's pessimistic view illuminates, not only are big retailers successfully driving out traditional music stores, but they are also dictating and limiting consumer choice in music variety (the retail counterpart to Clear Channel!). The results of my survey concur with the rise in discount retailer prevalence in the market; in fact, the majority of respondents who had purchased a CD in the last month, purchased from a discount retailer as opposed to an alternative source such as mail order, internet, or independent retailer.

In addition to this strong pressure from discount retailers, traditional music stores are also facing strong competition from internet retailers such as Amazon.com, Barnes & Noble, and even eBay. With minimal overhead costs, unlimited shelf space, and unparalleled convenience, internet retailers offer an experience that cannot be paralleled in a traditional brick-and-mortar store. They can offer a wider selection of products (including digital downloads) at relatively lower costs without sacrificing their own profits.

Despite the tough competition, traditional music retailers cannot be eliminated from the picture yet. In fact there are many ways that these retailers can innovate in order to remain relevant. First, as has become popular, many traditional music stores such as Virgin have transformed themselves into entertainment lifestyle stores, selling DVDs, MP3 players, books, headphones, posters, clothing and other products to supplement CD sales. Second, many traditional stores have merged the in-store experience with the digital realm, allowing customers ultimate flexibility and convenience. For instance, Trans World Entertainment, which owns

fye.com and its brick-and-mortar counterpart, FYE, has put kiosks in all there stores that allow customers to shop for out of stock items and either burn a CD, download the MP3s, or ship the product to their home. This type of innovation allows physical stores to remain relevant and convenient in the consumers' eyes, offering the best of both physical and internet retailing (Bruno, "Digital Track Sales…", 2005, p.1).

While traditional retailers will have to continue to innovate to stay relevant, they do offer something that none of their competition can, something that many devout CD purchasers crave. They offer a unique environment in which to browse, listen, discuss, and experience music with likeminded people, all elements that cannot be replicated adequately in either a discount retailer or an internet retailer. With these types of innovation and this nonreplicable aspect, traditional music retailers may be able to survive in this ever increasingly competitive market.

5.3 CONCLUSION

Based on industry opinions and the primary research results, it can be concluded that the market for tangible music among the student demographic will remain important in the future. While digital alternatives will certainly pull some consumers away from tangible music, the nonreplicable attributes of tangible music will allow for the existence of two music markets, one digital, one tangible.

Additionally, the industry will fine-tune their understanding and use of technology by fully utilizing the potential of digital music consumption. By supplementing tangible products with differentiated, unique, and consumer friendly digital alternatives, the industry will effectively open a new world of economic and cultural opportunities. The industry's optimal strategy for digital music will encompass many of the proposed strategies explained earlier such as increased prevalence in the mobile phone market, unique bundled downloads. The industry

will not be limited to one digital strategy, but instead will utilize many techniques to reach the customer ubiquitously while still protecting their licenses. I predict that the bulk of the digital market revenue will remain in the singles and mobile businesses; however, labels will also see new revenues from novel label/artist contracts.

While digital music is a critical market for the music industry to embrace, tangible music will remain the main revenue stream for labels and will continue to be an important market for student consumption.

6. ACKNOWLEDGMENTS

I would like to thank Professor Craig for all of his guidance and support along the way, Professor Subrahmanyam for the truly unique opportunity to explore, in depth, an area of passion, Jeff Bronikowski and Catherine Moore for their time and insight, and my peers for honest and willing participation in my guinea pig experiments.

7. APPENDIX A: SURVEY REPLICA

The internet based survey has been replicated below as accurately as possible. Because of some differences in formatting, the survey is not identical to the Surveymonkey.com version. The arrows (→) used below indicate skip logic that was utilized on the original survey. Survey responses are indicated in red.

Survey Draft

This survey is designed to measure your music preferences, listening habits, and purchasing behavior. Please answer as honestly and thoroughly as possible. Your opinions and input really matter.

Music Preferences

What are your three favorite music genres? (Label your first favorite with a "1", second favorite with a "2", and third favorite with a "3".) **This question was a warm-up, introduction question. Because it was not integral to my research, I have chosen not to include the responses.**

Approximately how many hours of music do you listen to per day? _**3.3 hrs (mean)**__

Where/how do you listen to music? (Check all that apply.)

Portable MP3 Player (i.e. iPod) **149 responses**
Portable CD player **20**
Home Stereo **56**
Computer **176**
Radio **70**
Other: __**20**__

Of those choices selected above, where/how do you listen to music ***most frequently***? (Select one option.)

Portable MP3 Player (i.e. iPod) **78 responses**
Portable CD player **6**
Home Stereo **7**
Computer **82**
Radio **8**
Other: __**4**___

Please rate these statements.

"I listen to music often."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**1**	**0**	**5**	**6**	**5**	**13**	**37**	**29**	**88**
Percentages (%)	**.5**	**0**	**2.7**	**3.3**	**2.7**	**7.1**	**20.1**	**15.8**	**47.8**

"My music collection is very important to me."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**2**	**3**	**8**	**2**	**14**	**24**	**28**	**24**	**78**
Percentages (%)	**1.1**	**1.6**	**4.4**	**1.1**	**7.7**	**13.1**	**15.3**	**13.1**	**42.6**

"My friends and I like to talk about music."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree

Responses	**1**	**3**	**8**	**14**	**30**	**32**	**35**	**21**	**40**
Percentages (%)	**.5**	**1.6**	**4.3**	**7.6**	**16.3**	**17.4**	**19**	**11.4**	**21.7**

"I go to live music performances often."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**4**	**19**	**29**	**25**	**32**	**26**	**17**	**12**	**20**
Percentages (%)	**2.2**	**10.3**	**15.8**	**13.6**	**17.4**	**14.1**	**9.2**	**6.5**	**10.9**

"I care about the sound quality of my music."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**0**	**1**	**5**	**9**	**23**	**39**	**45**	**25**	**36**
Percentages (%)	**0**	**.5**	**2.7**	**4.9**	**12.6**	**21.3**	**24.6**	**13.7**	**19.7**

"Radio influences my music preferences."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**18**	**20**	**24**	**27**	**38**	**34**	**14**	**5**	**4**
Percentages (%)	**9.8**	**10.9**	**13**	**14.7**	**20.7**	**18.5**	**7.6**	**2.7**	**2.2**

Purchasing Intent/Behavior

"Purchasing": Does not include downloading music but instead constitutes purchase of a physical CD from a store, the internet, or mail order service.

Approximately how many compact discs (CDs) do you currently own? __**150 (mean)**__

Approximately how many CDs do you ***purchase*** a month? _**1.35 (mean)**___

When was the last time you ***purchased*** a CD?

Never **6 responses**
Less than a week ago **17**
Between 1 week and 1 month ago **35**
Between 1 and 3 months ago **39**
Between 3 and 6 months ago **19**
More than 6 months ago **68**

Where did you ***purchase*** your last CD?

Store **136** Internet **28** Mail Order **8** Other **6** I've never ***purchased*** a CD **6**

Is this where you typically ***purchase*** CDs? Y **144** N **34**

→ If no, where else do you typically ***purchase*** music? (Circle all that apply.)

Internet **22** Large Retailer **26** Independent Music Store **11** Mail Order **5** Other **4**

Was your last ***purchased*** CD by an artist you were already familiar with? Y **155** N **22**

What influenced your last ***purchase***? (Check all that apply.)

Radio **65**
Friends/Relative **94**
Music video channel **33**
Saw in store **32**
Movie soundtrack **21**
Live performance **37**
TV advertisement **7**

Featured in TV show **13**
TV show appearance by artist **8**
Downloaded MP3 **59**
Internet **47**
Magazine/Newspaper **25**
Internet radio **10**
Record club **1**
Video game **2**
Other: ___**21**_____

How likely are you to ***purchase*** a CD in the next month?

	No Chance	1	2	3	4	5	6	7	Very Likely
Responses	**39**	**34**	**29**	**23**	**15**	**16**	**8**	**5**	**15**
Percentages (%)	**21.2**	**18.5**	**15.8**	**12.5**	**8.2**	**8.7**	**4.3**	**2.7**	**8.2**

If CD prices were lowered to **$8** per disc, how likely would you be to ***purchase*** a CD in the next month?

	No Chance	1	2	3	4	5	6	7	Very Likely
Responses	**9**	**9**	**19**	**16**	**28**	**25**	**24**	**11**	**42**
Percentages (%)	**4.9**	**4.9**	**10.4**	**8.7**	**15.3**	**13.7**	**13.1**	**6**	**23**

If CD prices were lowered to **$6** per disc, how likely would you be to ***purchase*** a CD in the next month?

	No Chance	1	2	3	4	5	6	7	Very Likely
Responses	**4**	**9**	**8**	**15**	**18**	**27**	**25**	**18**	**60**
Percentages (%)	**2.2**	**4.9**	**4.3**	**8.2**	**9.8**	**14.7**	**13.6**	**9.8**	**32.6**

If CD prices were lowered to **$4** per disc, how likely would you be to ***purchase*** a CD in the next month?

	No Chance	1	2	3	4	5	6	7	Very Likely
Responses	**1**	**7**	**9**	**7**	**10**	**15**	**16**	**30**	**89**
Percentages (%)	**.5**	**3.8**	**4.9**	**3.8**	**5.4**	**8.2**	**8.7**	**16.3**	**48.4**

Music Behavior/Attitudes

"Download": Receive a digital copy of a song/album, not including ringtones.

Have you ever downloaded music (either for free or for-purchase)? Y **182** N **2**

→ If yes, for free (LimeWire, Kazaa, BitTorrent, etc.), for-purchase (iTunes, ect.), or both?
Free **89** For-Purchase **25** Both **68**

→ Is this your typical method of acquiring music? Y **151** N **31**

→If not, how do you typically acquire music?
Purchase CDs **20** Free Downloads **1** For-Purchase Downloads **0** Borrow CD's from friends **7** Other **4**

Please rate these statements.

"It's a consumer's right to download for ***free***."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**24**	**13**	**23**	**20**	**42**	**21**	**20**	**5**	**16**
Percentages (%)	**13**	**7.1**	**12.5**	**10.9**	**22.8**	**11.4**	**10.9**	**2.7**	**8.7**

"I don't like ***free*** downloading but CDs are too expensive."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**9**	**9**	**12**	**23**	**32**	**32**	**29**	**14**	**24**
Percentages (%)	**4.9**	**4.9**	**6.5**	**12.5**	**17.4**	**17.4**	**15.8**	**7.6**	**13**

"Downloading for ***free*** is illegal and should be stopped."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**27**	**21**	**37**	**27**	**38**	**10**	**14**	**5**	**5**
Percentages (%)	**14.7**	**11.4**	**20.1**	**14.7**	**20.7**	**5.4**	**7.6**	**2.7**	**2.7**

"I worry about the ***morality*** of downloading."

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
Responses	**32**	**26**	**21**	**16**	**25**	**24**	**25**	**6**	**9**
Percentages (%)	**17.4**	**14.1**	**11.4**	**8.7**	**13.6**	**13**	**13.6**	**3.3**	**4.9**

Please specify what, if anything, would encourage you to purchase more CDs or pay for downloads.
OPEN ENDED

Alternate Entertainment

If you were given **$100 per month** to spend on personal entertainment (not including social entertainment such as going out to a movie, restaurant, club, etc.) how would you allocate your budget across the following categories? You can spend anywhere from $0-$100 on a category. Remember, your total must add up to $100.

$**37.89 (mean)** DVDs
$**30.36 (mean)** CDs
$**20.98 (mean)** For-Purchase Downloaded Music (not including ringtones)
$**2.63 (mean)** Ringtones
$**7.73 (mean)** For-Purchase Downloaded Video (including TV shows, music videos, and films)
$**12.69 (mean)** Video Games
$**28.01 (mean)** Books (excluding required readings)

$ 100

→ If $0 for CDs and/or For-Purchase Music: Why did you spend $0 on music purchases?
I'm not interested in music. **2** I download all of my music for free. **49** Other: **27**

In-depth of CD Purchasers (People who buy more than 2 CDs a month.)

Do you generally read the inserts of your CDs?
Never **1** Sometimes **28** Often **13** Always **36**

Do you generally listen to the songs on your CDs in order?
Never **2** Sometimes **25** Often **32** Always **18**

Do you display your CDs for viewing? Y **25** N **52**

Would you purchase a CD of your favorite artist even if you were unsure of the content or quality of the music? Y **60** N **18**

Have you ever purchased a CD because of its extra features (i.e. video clips, interviews, ect.)? Y **12** N **66**

What other value do you find in owning CDs as opposed to downloading music?
OPEN ENDED

Demographics

Gender: M **69** F **109**

Age: _**20.16 (mean)**__

Race (Optional): Caucasian **121** Hispanic **5** Asian **39** African American **5** Other: _**8**_____

Monthly Income (Student Income or Student Allowance from other source):
<$100_**32**__ $100-$500_**82**__ $500-$1,000_**37**__ $1,000-$1,500_**18**__ $1,500-$2,000_**4**__ >$2,000_**4**__

Are you currently attending college? Y **175** N **2**
→What year are you in school? Freshman **49** Sophomore **21** Junior **33** Senior **71**
→If yes, what college? NYU **131** Other **46**
→ If NYU, what school?
Stern **72** Gallatin **4** Steinhardt **17** CAS **15** Tisch **22** Other **1**
→ If NYU, would you like to make yourself available for follow-up research?
→If yes, First and Last Name, Email Address

8. WORKS CITED

Bricklin, Dan. "The Recording Industry is Trying to Kill the Goose That Lays the Golden Egg." Dan Bricklin's Web Site. 9 Sept. 2002. 11 Oct. 2005 <http://www.bricklin.com/recordsales.htm>.

Bronikowski, Jeff. Personal interview. 29 Jan. 2006.

Brown, Barry A., Erik Geelhoed, and Abigail J. Sellen. The Use of Conventional and New Music Media: Implications of Future Technologies. HP Laboratories Bristol. Hewlett Packard, 2001. 20 Feb. 2006.

Bruno, Anthony. "Digital Entertainment: The Future of Music: Industry Transformation is Just Getting Started." Billboard 3 Dec 2005.

Bruno, Anthony. "Digital Track Sales Stall." Billboard. 3 December 2005.

Bruno, Anthony. "Retailers Work Toward Digital Future." Billboard. 3 December 2005.

Burgess, Richard James. The Art of Music Production. 3rd ed. New York: Omnibus Press, 2005.

"Cost of a C.D." RIAA.com. Recording Industry Association of America. 3 Mar. 2006 <http://www.riaa.com/news/marketingdata/cost.asp>.

Frith, Simon. Performing Rights: On the Value of Popular Music. Cambridge, MA: Harvard University Press 1996.

IFPI: 06 Digital Music Report. International Federation of the Phonographic Industry. 2006. 3 Mar. 2006 <http://www.ifpi.org/site-content/press/20060119.html>.

Jenkins, Mark. "Hit Charade: the Music Industry's Self-Inflicted Wounds." MSN.com 20 Aug. 2002. 3 Mar. 2006 <http://slate.msn.com/?id=2069732>.

Katz, Mark. Capturing Sound: How Technology has Changed Music. Berkeley, CA: University of California Press 2004.

Kusek, David; Gerd Leonhard. The Future of Music: Manifesto for the Digital Revolution. Boston, MA: Berklee Press 2005.

Leeds, Jeff. "Labels Halt Downloads to Increase CD Sales." New York Times 9 Mar. 2006. 9 Mar. 2006 <http://www.nytimes.com/2006/03/09/arts/music/09sing.html?ex=1142571600&en=f35464cad1e14682&ei=5070&emc=eta1>.

Leeds, Jeff. "When All the 'Greatest Hits' are Too Many to Download." New York Times 2 Feb. 2006. 2 Feb. 2006 <http://select.nytimes.com/gst/abstract.html?res=F50816FB345B0C718CDDAB0894DE404482>.

Macklin, Ben. Online Music: Downloads, Streaming, Radio, Mobile. eMarketer. August 2005.

Moe, Wendy W., and Peter S. Fader. "Modeling Hedonic Portfolio Products: a Joint Segment Analysis of Music Compact Disc Sales." Journal of Marketing Research XXXVIII (2001): 376-385.

Moore, Catherine. Personal interview. 21 Mar. 2006.

Nicoli, Eric. Interview. Podcast From EMI Chairman, Eric Nicoli. 3 Mar. 2006 <http://special.the-raft.com/podcasting/ericnicoli.mp3>.

Oestreicher-Singer, Gal, and Arun Sundararajan. "Digital Rights and Wrongs." STERNbusiness Fall/Winter 2005.

Peitz, Martin, and Patrick Waelbroeck. "An Economist's Guide to Digital Music." CESifo Economic Studies Vol. 51 (2005): 359-428.

Premkumar, G. Prem. Alternate Distribution Strategies for Digital Music. Communications of the ACM. Sept 2003/Vol. 46, No. 9.

"Robbie Signs £80m Deal." BBC News 2 Oct. 2002. 3 Mar. 2006 <http://news.bbc.co.uk/2/hi/entertainment/music/2291605.stm >.

"The Digital Music Revolution." BBC News 13 Apr. 2004. 3 Mar. 2006 <http://www.bbc.co.uk/liverpool/music/2004/05/digitalrevolution/>.