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20 January 2009

Digital Music Becomes (more) Rhizomatic:
Evolutionary Traits of the Music Industry

Music has always sent out lines of flight, like so many "transformational multiplicities," even overturning the very codes that structure or arborify it; that is why musical form, right down to its ruptures and proliferations is comparable to a weed, a rhizome. – Gilles Deleuze and Felix Guattari¹

Introduction

The Internet is a distributed network; and within the Internet are many hierarchical music distribution models such as iTunes and Last.fm competing for listeners. Over the past few years we've seen the hierarchical model of the newspaper industry succumb to decentralization as it struggles to compete with blog culture. This paper looks at data that predicts a similar decentralization of the music industry².

As music files continue to flow more freely on the Internet, music mimics certain inherent characteristics of the web best understood through Gilles Deleuze and Felix Guattari's rhizome metaphor. The rhizome has been used as a model to describe writing, memory, knowledge and the Internet. While the Internet is arguably not perfectly rhizomatic³, it is often a compelling metaphor to help analyze the complex layers of the Internet. For example, through the various

1 Gilles Deleuze and Félix Guattari, trans. Brian Massumi, *A Thousand Plateaus* (New York: Continuum International Publishing Group, 2004), 13.

2 While the term 'music industry' encompasses a large group of people including: producers, promoters, musicians, engineers etc., in this paper I use the term to refer to the general business of buying a selling music

3 Amanda Spink and Michael Zimmer, *Web Search: Multidisciplinary Perspectives* (New York: Springer, 2008), 41.

protocols that are the foundation of the Internet (HTTP, FTP, etc.), the web can potentially be entered at any point. Also, because the Internet is fundamentally a distributed (non-hierarchical) network it allows for interconnectivity and non-linearity.

This paper argues that digital music is becoming more rhizomatic and in the process transforming the music industry. Through a comparison of various music distribution sites on the web I suggest that the best way to connect musicians and fans are those which embrace the characteristics that define the rhizome - such as removing the barriers that prevent fans from sharing music and facilitating the interconnectivity of data. In this way I envision playing music on the web in a similar manner as to how we read blogs in an RSS reader.

Music Is Rhizomatic: Read like you play music

In *A Thousand Plateaus*, Gilles Deleuze and Felix Guattari introduce the concept of a "rhizome" to describe a representative model that extends in all directions and has multiple entryways. Thus, the rhizome doesn't rely on specific dualisms and is "very different from the tree or root, which plots a point, [and] fixes an order". The rhizome is detached from the One as subject or object, for the rhizome is comprised of multiplicities.

In their book they "enumerate [six] approximate characteristics of the rhizome" of which include: connectivity, heterogeneity, multiplicity and cartography. As Deleuze and Guattari have described, it is the "removal of blockages" and the "the maximum [number] of openings" that foster the connectivity of the map. They continue to explain, "The map is open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification."

Like the Internet, music is also rhizomatic. Deleuze and Guattari emphasize that a piece of music is rhizomatic in that it has "always sent out lines of flight". Music is elastic, it is open to interpretation, and it spreads like oil. Even in the most

literal reenactments music is a “multiplicity,” rather than a “multiple,” wresting it from any relation to “the One”.⁴ And in each performance “the whole piece proliferates” as the musical points are “transformed into lines”.⁵

In Brian Massumi’s forward to the translation of *A Thousand Plateaus*, he explains that we listen to music rhizomatically: “When you buy a record there are always cuts that leave you cold. You skip them. You don’t approach a record as a closed book that you have to take or leave. Other cuts you may listen to over and over again. They follow you. You find yourself humming them under your breath as you go about your daily business.” Listening to the music in this way, Massumi clearly exemplifies the deterritorialized map that has come to define the rhizome.

If we can understand books, music and the Internet as rhizomatic, can *one* thing be more rhizomatic than another? I believe it can: I mentioned above that the Internet is not perfectly rhizomatic. This argument stems from the reality that firewalls are set up to block access to certain points, and from the evidence that shows search engine algorithms occasionally display hierarchical patterns of linking.⁶ The inverse would therefore be true: by increasing any of the defining characteristics of the rhizome, certain models can evolve which embody a more perfect rhizome.

In the brief history of the Internet, how have the characteristics of the rhizome proliferated? My intention is to illustrate how music—and the content that lives on the web—moves toward a more rhizomatic state. In the next section I ask: How has the web become more rhizomatic? How do we increase the level of

4 Dan Clinton, “Rhizome.” <<http://csmt.uchicago.edu/annotations/deleuzerhizome.htm>> (accessed January 15th, 2006).

5 Gilles Deleuze, Félix Guattari and Brian Massumi, *A Thousand Plateaus* (New York: Continuum International Publishing Group, 2004), 9.

6 Mark Bonta and John Protevi. *Deleuze and Geophilosophy* (Edinburgh: Edinburgh University Press, 2004), 137.

connectivity on the web?

Extending the Web

In *Dialogues II*, Deleuze wrote, “The good ways of reading today succeed in treating a book as you would treat a record you listen to, a film or a TV programme you watch.” He believed that we shouldn’t let the medium of the book – its length and suggested linearity - define how we read the book. Deleuze stressed that we should remove the *concept* from the *style* in order to translate, but not interpret, the meaning. As the Internet becomes more complex, the good ways of reading the web will be to connect people directly to the information that interests them most. RSS feeds and web mashups are two useful ways to extract content from style in order to present the most relevant information.

RSS feeds stimulate connectivity and multiplicities on the web because the information they encode can be presented and styled in a variety of different formats simultaneously. This is made possible by the XML (Extensible Markup Language) that defines every RSS feed. XML is a standardized language that communicates across platforms and is designed to aid information systems in sharing structured data on the web.⁷ In the case of an RSS Reader (ex. Google Reader), each posting has been removed from the page’s style (HTML and CSS formatting). Within a RSS Reader a user can skip around the web, from blog to blog, post to post, and rhizomatically dissect the web like in Massumi’s music analogy.

‘Mashups’—web applications that combine data from more than one integrated tool—are another tool that helps make the web more rhizomatic.⁸ The term mashup implies “easy, fast integration, frequently done by access to open APIs

⁷ Wikipedia, “XML.” < <http://en.wikipedia.org/wiki/XML> > (accessed January 15th, 2006).

⁸ Wikipedia, “Mashup.” < [http://en.wikipedia.org/wiki/Mashup_\(web_application_hybrid\)](http://en.wikipedia.org/wiki/Mashup_(web_application_hybrid)) > (accessed January 15th, 2006).

and data sources to produce results data owners had no idea could be produced.”⁹ One of the more common mashups combines geographic data with the Google Map API to visually plot data. Examples of this include the ChicagoCrime.org site where reported crimes in the city of Chicago are filtered and displayed on searchable local maps. Other types of mashups pull photos from Flickr or videos from YouTube and similarly repurpose the content.

Connectivity and multiplicities have given us new tools for reading the web and continue to influence our reading habits. A recent PEW Research Center survey shows that among those who primarily get their news online, 44% find their news through some type of RSS Reader.¹⁰ In the next section I’ll show how these tools have not only transformed how we connect to data, but how industries are being reshaped.

Connectivity Facilitates Unbundling

In the 1960's Ted Nelson was concerned with the limitations that paper placed on writing. He envisioned a *"file system that would have every feature a novelist or absentminded professor could want, holding everything he wanted in just the complicated way he wanted it held, and handling notes and manuscripts in as subtle and complex ways as he wanted them handled."*¹¹

To Nelson, paper was like a prison because the boundaries of the paper restricted connectivity between knowledge and ideas. It seemed to him that as soon as you had a computer you could link every point to wherever you wanted it to be linked. Subsequently, in his critique of the web browser as glorified paper

9 Ibid..

10 The Pew Research Center, *Key News Audiences Now Blend Online and Traditional Sources* <<http://people-press.org/report/?pageid=1354>> (August 17, 2008).

11 Theodor H. Nelson, "A File Structure for the Complex, the Changing, and the Indeterminate", *New Media Reader* (Cambridge: MIT Press, 2003), 134.

he elucidated, "Every idea wants to spring out in all directions - everything is connected with everything else, sometimes more than others."¹² Since the computer could hold any structure in any form, the notion of hypertext became obvious to him. Nelson started Project Xanadu back in 1960 to facilitate a "Deep interconnection, intercomparison and re-use" of data with a strict emphasis on accessibility for the user. While the official release of Xanadu happened far too late to be successful, Nelson's research on the project inspired many others to explore new ways of accessing and connecting data - the most notable example being Tim Berners-Lee in his development of the World Wide Web. Many other examples of Nelson's influence can be seen in the online applications that have fueled the Web 2.0 era of the Internet. Nelson's vision of a world unrestricted by the confines of paper would eventually be echoed in the development of RSS readers and blogs; tools which in turn have contributed directly to the decay of the newspaper and magazine industry.

On the web, newspapers are subject to what Nicolas Carr calls unbundling. The idea is that traditionally the newspaper business made its profit by selling the bundled newspaper as a single product. When readers subscribed or purchased the bundle they were then navigating through stories within the boundaries of that newspaper. Carr explains, "When a newspaper moves online, the bundle falls apart. Readers don't flip through a mix of stories, advertisements, and other bits of content. They go directly to a particular story that interests them, often ignoring everything else." In this way competition for the reader's attention increases substantially because each individual newspaper article has to be salient enough to cut through a sea of online journalism. As Carr has noted, "There are many reasons for the long-term decline in newspaper readership. But one of the most important factors behind the recent acceleration of the trend is the easy availability of news reports and headlines on the Internet." Blogs give

12 Ted Nelson interviewed by Tracey Logan, *Visionary lays into the web* (BBC News, October 8, 2001)
<<http://news.bbc.co.uk/2/hi/science/nature/1581891.stm>>

everyone the tools of production and a means of distribution. As Chris Anderson, author of *The Long Tail*, has written, “Talent isn’t necessarily universal, but it’s widely spread: Give enough people the capacity to create, and inevitably gems will emerge.”¹³

The Long Tail is Anderson’s oft-cited theory that describes the niche strategy of businesses, such as Amazon.com or Netflix, that sell a large number of unique items, each in relatively small quantities¹⁴. The concept behind The Long Tail is based on the principles of the Pareto distribution (also known as the “80-20 rule”), which states that 80 percent of consequences stem from 20 percent of causes¹⁵. Unlike the Pareto distribution, The Long Tail is applied to the near-infinite selection of inventory on the Internet. In the case of journalism: the ease of starting a blog democratizes production (making the tail longer) while accessibility democratizes distribution (making the tail fatter). Thus, access to a large amount of niche blogs allows them to compete directly with the NY Times. The distributed network of bloggers reporting on stories from around the world is a hard model for the hierarchical newspaper industry to compete with. Old business mantras like *economy of scale* are transformed into new economics models like the Long Tail.

Four Channels of Music Distribution

As suggested in the introduction, if we want to find a song there are hundreds of different places on the web to look. Specific websites aside, I’ve narrowed the online digital music market into four distinct channels:

1) **legal paid downloads:** iTunes, Amazon, eMusic, Rhapsody

¹³ Chris Anderson, *The Long Tail* (New York: Hyperion, 2006), 54.

¹⁴ Wikipedia, “The Long Tail.” <http://en.wikipedia.org/wiki/The_Long_Tail> (accessed January 12th, 2006).

¹⁵ Nick Bunkley, “Joseph Juran, 103, Pioneer in Quality Control, Dies”, *New York Times* (March 3, 2008), <http://www.nytimes.com/2008/03/03/business/03juran.html?_r=2&ref=obituaries&oref=slogin>

- 2) **legal free downloads:** Jamendo.com, SpiralFrog.com
- 3) **illegal downloads**¹⁶: Piratebay.com, Waffles.fm, MP3S Blogs
- 4) **streaming audio:** Last.fm, Pandora, iLike, MP3S Blogs

From the perspective of the user each channel has its pros and cons:

	iTunes	Jamendo.com	ThePirateBay.com	Last.fm
Selection / Findability	Very Large, consistent format and quality	Small	Very Large, but inconsistent in format and quality	Very Large, but limited*
Price	High: \$0.99 per track, requires a credit card	Free	Free	Free to listen, but doesn't allow downloads
Legality	Legal	Legal	Illegal	Legal
Discoverability: Opportunity to Discover New Music	Low	Medium: doesn't use collaborative filtering, but suggests free downloads	Low	High: utilizes collaborative filtering
Channel	legal paid downloads	legal free downloads	illegal downloads	streaming audio

Figure 1

In the chart above I chose the industry leader from each of the channels to represent the channel as a whole: iTunes, Jamendo.com, ThePirateBay.com and Last.fm.

*Last.fm has been classified as 'limited' because certain tracks are limited to three plays per user.(17)

The blue color in the chart above highlights the most desirable characteristics from the listener's perspective. What is interesting is that the most desirable characteristics are also those that are most rhizomatic. For example, iTunes' large library extends the territory of the map; meanwhile 'free' and 'legal' aid in

16 I've used the term 'illegal downloads' to refer to any site or protocol that delivers material where it is at best questionable as to whether the material is in doubt of copyright infringement. While this 'illegal downloads' channel may occasionally serve legal material, sites like the ThePirateBay.com and Waffles.fm are notorious for the illegal material they supply. Examples linking The Pirate Bay directly to illegal downloads: LA Times <<http://www.latimes.com/entertainment/news/la-ca-webscout29apr29,0,1261622.story?coll=la-home-entertainment>> and TechCrunch <<http://www.techcrunch.com/2008/01/31/the-pirate-bay-makes-4-million-a-year-on-illegal-p2p-file-sharing-says-prosecutor/>>

17 Erick Schonfeld, "Goodbye, 30-Second Song Clips. Last.fm Offers Limited Full-Track Streaming and Moves Towards Subscriptions", *Techcrunch* (January 23, 2008) <<http://www.techcrunch.com/2008/01/23/goodbye-30-second-song-clips-lastfm-offers-limited-full-track-streaming-and-moves-towards-subscriptions>> (accessed January 15th, 2006).

the “removal of blockages” that foster the connectivity of the map. If we could take the best characteristics from each of the channels we would make a more rhizomatic tool that would also be more desirable for fans.

Music Search Engines Add Connectivity To Music On The Web

Over the past few years music search engines have become a popular solution for finding MP3s on the web. Sites like Seeqpod.com and Skreemr.com crawl the web for music and then provide links to the MP3s they find. Music search engines don't store the MP3s on their servers, they index the files and enable users to stream or download the music they find. In this way music search engines are more like Google, and less like YouTube. YouTube often hosts copyrighted material without the copyright holder's consent, but has been able to dodge copyright infringement cases since it began in 2005. YouTube falls under the protection of the Safe Harbor Exemption outlined in the Digital Millennium Copyright Act (DMCA) which allows sites to host copyrighted material, just as long as they are unaware and don't upload it themselves. Similarly, music search engines are protected from copyright infringement and continue to serve the MP3s they (so innocently) find.

Songza is a music search engine that goes as far as to search YouTube and strip out the audio track. On YouTube you can often find a collection of tracks from an artist, each dubbed over a frozen image of the musician or a remixed video. A writer at Wired Magazine has cleverly explained, “You want the world's best on-demand music service? Go to YouTube and close your eyes.” Songza, which is a self-proclaimed “internet jukebox”, exhibits yet another inventive way of scraping music from the Internet and making it searchable and free for all users.

If we think of the Internet as a large map, then by uploading music to the web we extend the map; and by using music search engines we create more connectivity. Music search engines look for data already present on the network

and create new lines of access. These engines are especially useful because they offer paid-legal downloads, illegal downloads and streaming audio in a way that blends the four music distribution channels.

Last.fm and Discoverability

Each of the four channels of music distribution offers access to music much like television channels: you can only focus your attention on one of these channels at a time. Even though they don't offer the same services they compete directly in the "attention economy".¹⁸ The scarcity of attention in an abundance of information commodifies attention and adds value to it. As music search engines continue to filter music freely, legally and directly into the hands of their fans, the competition for attention will no doubt increase.

Amidst the wealth of choices *discoverability* is argued as being the final barrier in the transformation of the music industry. Discovery through means of collaborative filtering has been a proven force in other online businesses such as Netflix and Amazon.¹⁹ Netflix has even launched a contest offering \$1 million to anyone who can improve the results of their recommendation engine by 10%.²⁰ A recent study from The University of New South Wales entitled *Last.fm and the Music Multiverse* suggests that "it is discovery, rather than production or distribution that provides the major challenge for emerging artists operating in the contemporary mediascape."²¹ The study concludes that "the facility for these engines of discovery to effectively traverse, manipulate and captilise upon a

18 Davenport, T. H. and J. C. Beck, *The Attention Economy: Understanding the New Currency of Business*, (Cambridge: Harvard Business School Press, 2001)

19 Alex Iskold, "The Art, Science and Business of Recommendation Engines", *Read Write Web* (January 16, 2007) <http://www.readwriteweb.com/archives/recommendation_engines.php>

20 Netflix Prize <<http://www.netflixprize.com/>> (accessed January 15th, 2006).

21 Mat Wall-Smith, Ross Rudesch Harley, and Andrew Murphie, "LAST FM and the Music Multiverse", (Brisbane: Queensland University of Technology, Dec 2007), 4.

newly dynamic multiverse, to realise a more appropriate economy of affect, will determine the future vitality, the future industry, of musical expression.”

There is a good case to be made for the importance of discovery. Open source advocate Tim O’Reilly has professed, “Obscurity is a far greater threat to authors and creative artists than piracy.”²² The infinite amount of blogs, images and music readily available on the Internet makes finding quality and targeted information more difficult. Among musicians there already exists the paradox that the absolute greatest band in the world could exist, but no one will ever hear of them. This idea has previously been the case, but now it’s true for different reasons. Twenty years ago a band would release an album and find their greatest challenge was getting radio play. Today there is infinite airtime, so musicians are competing for the consumer’s attention. The consumer has an almost infinite amount of choice. As marketing expert Seth Godin puts it:

“I could get in the car, turn on the radio and hear a song I wasn’t expecting and maybe I would like it. If I didn’t like it, it didn’t cost [the record labels] anything anyway. Now it’s about permission. Now I get on the radio and in my car I have either my MP3s in there or I have satellite in there, I don’t hear anything I don’t want to hear. So, the model has totally changed.”²³

Discoverability is the hallmark of streaming audio sites like Last.fm and Pandora (as is show in the figure 1), but what these sites don’t account for is *findability*. If discoverability helps you come across new music, findability is the ability to locate exactly what you are searching for - it is the difference between searching

22 Tim O’Reilly, “Piracy is Progressive Taxation, and Other Thoughts on the Evolution of Online Distribution”, *OpenP2P* (December 11, 2002) <<http://tim.oreilly.com/pub/a/p2p/2002/12/11/piracy.html>>

23 Seth Godin, “The Live Music Talk” <http://sethgodin.typepad.com/seths_blog/2008/03/the-live-music.html>, (accessed January 15th, 2006).

and browsing. I can browse Last.fm to play music by a certain artist, but when I seek out a specific track by that artist (even one that I just heard on Last.fm) it is often not available. Findability needs to work hand-in-hand with discoverability: after I discover new music I need to be able to find it again.

The discoverability/findability dilemma is best dramatized in Jorge Luis Borges's 1941 short story "The Library of Babel". Borges's library is an infinite expanse of bookshelves containing every book that could possibly be written, past or future, and in any language including potentially nonsensical languages. The library also includes books that are almost exactly identical with the exception of one character, thus leading to versions with practically unnoticeable error. Yet amidst this incalculable irrelevance lies the most radiant works of art. Nonetheless, as a result of overwhelming choices, a librarian in Borges's library wouldn't have the ability to find books of true value, unless by chance she were to find, as Borges describes it, "a book which is the cipher and perfect compendium of all the rest: some librarian has perused it, and it is analogous to a god."²⁴ Applying Borges's library as an exaggerated metaphor for the vast amount of information on the Internet, it wouldn't seem unreasonable to say that Google is an unperfected "compendium of all the rest." Taking lessons from Google's search algorithm we will learn that actually finding reliable information comes from ubiquity and reputation. For example, the more other people around the Internet cite your name and link to your work the more valuable it must be.

Kevin Kelly supports this idea in his book *New Rules for the New Economy*. In a scientific analysis of how the network rewards generosity he explains, "Ubiquity drives increasing returns in the network economy. The question becomes, what is the most cost-effective way to achieve ubiquity? And the answer is: give things away. Make them free."²⁵

24 Jorge Luis Borges and Anthony Kerrigan, *Ficciones* (Paris: Grove Press, 1963), 85.

25 Kevin Kelly, *New Rules for the New Economy* (New York: Penguin, 1999), 56.

The NY Times realized this trend in 2007 when they stopped charging for access to parts of its website. The Times reported that many more readers were coming to the site from search engines and links on other sites instead of coming directly to NYTimes.com. “These indirect readers, unable to get access to articles behind the pay wall and less likely to pay subscription fees than the more loyal direct users, were seen as opportunities for more page views and increased advertising revenue” explained the NY Times²⁶.

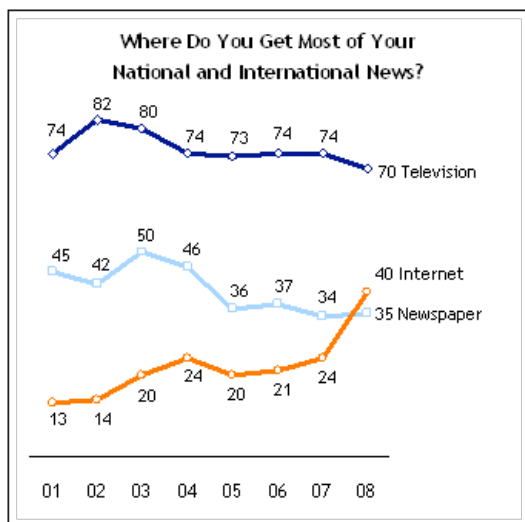


Figure 2: Where Do You Get Most of Your National and International News?

December 23, 2008 Pew Research Center

It was probably somewhere around this time that we can safely assume the tipping point for online journalism had been reached.²⁷ Recent data [figure 2] shows that 40% of Americans get their news online, up from 24% in 2007.²⁸ It

²⁶ Richard Pérez-Peña, “Times to Stop Charging for Parts of Its Web Site”, *The New York Times* (September 18, 2007)

<<http://www.nytimes.com/2007/09/18/business/media/18times.html>>

²⁷ David Weir, “The Tipping Point Toward New Media”, *BNET* (October, 14th, 2008)

<<http://industry.bnet.com/media/1000366/the-tipping-point-toward-new-media>>

²⁸ Pew Research Center, “Internet Overtakes Newspapers as News Outlet”, (December 23, 2008)

<<http://pewresearch.org/pubs/1066/internet-overtakes-newspapers-as-news-source>>

also shows that more people are getting their news online than from newspapers.

The Wall Street Journal is one of the last mainstream newspapers protecting access to their online edition with a paid-subscription wall. On January 10, 2008 they opened the door to their online edition by allowing only commentary and opinion pages to be free. TechCrunch's Erick Schonfeld responded, "Interestingly, when the New York Times tried the same bifurcated model it chose to make its news free and its opinion columnists were supposed to be the big draw for the online subscription service. So are people more willing to pay for opinion or for news? The answer is neither. We all know how the Times' experiment worked out. It is now completely free."²⁹

Ultimately, the deciding factor won't come from what the music industry wants or what musicians want; it is going to be what the market wants – and the market continues to edge toward freeing media. Michael Arrington of TechCrunch has argued in *The Inevitable March of Recorded Music Towards Free*, "The evidence is unmistakable already. In April 2007 the benchmark price for a DRM-free song was \$1.29. Today it is \$0.89, a drop of 31% in just six months." British economist Will Page has illustrated the fall in 'unit' price of a digital music track since 2002³⁰ (figure 3). Page argues that legal-free-music downloads are "'Tipping Points' which risk pushing recorded music into a public good status – where the market could fail."³¹

29 Erick Schonfeld, "The Wall Street Journal Edges Towards Free", *TechCrunch* (January 10, 2008)

<<http://www.techcrunch.com/2008/01/10/the-wall-street-journal-edges-towards-free>>

30 "Within each of these price points caution is required as the unit may contain different qualities " - Will Page, "Is The Price of Music Heading Towards Zero?" *Transmissions* (December 2, 2006).

31 *Ibid.*

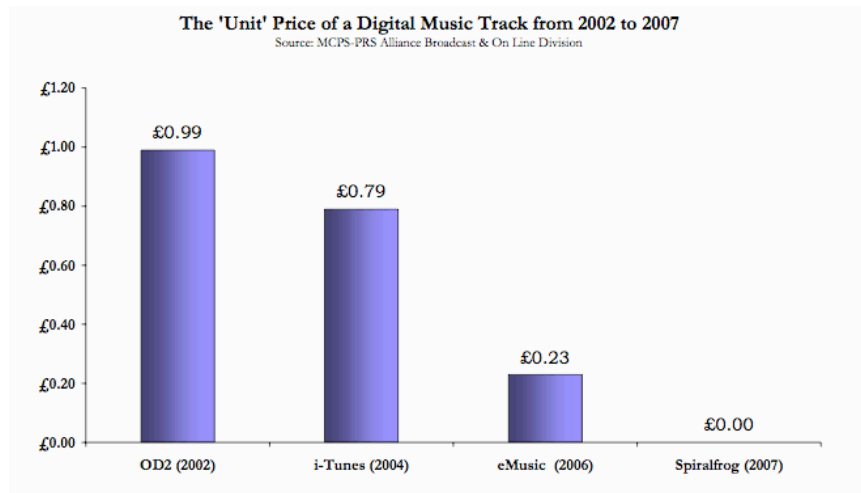


Figure 3: The 'Unit' Price of a Digital Music Track from 2002 to 2007

2006 Will Page, Is The Price of Recorded Music Heading towards Zero?

It is not within the scope of this paper to completely exhaust the claim that all music will one day be free, but I am trying to illustrate that it is a likely by-product of the unbundling of the music industry. As a consequence, considering the likelihood that the “price” of all music may eventually be free, what is the best way for musicians and fans to connect? What might be the future for the four channels of music distribution? Would iTunes suddenly open its entire library to the public for free (as they already do with podcasts)? Will the four channels merge under one umbrella? Will the government intercede and attempt to tax music at the level of the ISPs³²?

My hope is that the four channels will blend in a way that gives users the most control of where to get their music from (findability) and how to find it (discoverability). Similar to how writers use blogs, this new model should put the musician in charge of distribution in order to connect directly with their fans. A music aggregator (like a “Google Reader” for digital music) would provide a distributed solution that more closely resembles the distributed network of the

32 Michael Arrington, “The Music Industry’s Last Stand Will Be A Music Tax”, *TechCrunch* (January 10, 2008)

<<http://www.techcrunch.com/2008/01/10/the-music-industrys-last-stand-will-be-a-music-tax>>

Internet. In the next section I'll show how Songbird acts as a music aggregator and is evolving music more rhizomatically.

Play The Web: Songbird

Songbird is an open source music player that can play back, manage and discover new music. In addition to harnessing the power of music search engines, it builds mash-ups by linking relevant data to the music. Having been in development since 2006, Songbird finally made its 1.0 release just this past December. It is built on the same Mozilla technology that is responsible for bringing us Firefox and therefore shares a lot of similarities with the open-source web browser. Not only does it have a somewhat similar look-and-feel to Firefox, but because it shares a similar codebase to Firefox, anyone familiar with developing add-ons (also known as extensions³³) for Firefox can jump right in and start developing add-ons for Songbird without having to worry about combating a heavy learning curve.

³³ Firefox extensions personalize web browsing, as well as connect the user - more quickly - to data. A few examples of the extendibility made possible include:

- 1) The Firebug - used by web developers to dissect the anatomy of a web page far beyond what had ever been allowed by other browsers.
- 2) DownloadThemAll! - Download everything on a page with one click of a button
- 3) Pirates of the Amazon - integrates a "download 4 free" button next to CDs, DVDs and games on Amazon.com, linking the user to free downloads available on the PirateBay.com (unavailable as of December 9, 2008)
- 4) Ubiquity - literally connects data to data using various APIs from around the web to create instant web mashups

The important thing to remember is that this functionality wasn't possible before open-source development. Innovation like this has come through the dedicated open-source communities working together to evolve the web. In comparison to a closed browsers like Internet Explorer, it would be difficult to imagine this kind of flexibility and inventiveness from Microsoft. Although in order to compete, the latest version of Internet Explorer (while it is still considered proprietary software) allows for "add-ons", but the dedication and inventiveness pales in comparison to the 1.5 million add-on downloads being downloaded each day for Firefox.

The following are a few add-ons already for Songbird that help to proliferate and instantly connect data from around the web:

- *Concerts* displays touring schedules of the musician you are listening to, it tells you if they are coming to your local area any time soon and allows you to purchase tickets.
- *LyricMaster* queries online lyrics databases and displays the lyrics in the sidebar next to the track as it plays.
- *MashTape* displays artist's info, reviews, news, photos and videos from the musician.
- The *Last.fm* extension sends metadata about your listening habits back to the Last.fm database.

Extensions facilitate the *deep Interconnection, intercomparison and re-use* of data that resonates similarly with the work of Ted Nelson, as well as with Deleuze and Guattari's rhizome. Along these lines of reasoning, iTunes can be held under the same esteem as Nelson's analogy for paper as a prison. Therefore, one of the most remarkable aspects of Songbird is that not only is it open-source, but it is extendable. In this respect Songbird hopes to rival iTunes just as Firefox has taken a large chunk of the browser market from Microsoft's Internet Explorer browser.

Another remarkable feature of Songbird is what their developers call "play the web": any MP3 that is embedded on an HTML page can be played back as live streaming audio or downloaded and brought into your Songbird library of music. This is particularly useful when browsing "MP3 Blogs". Typically an MP3 blog will post a few MP3s each day from various artists and include a brief review. Some of these sites are infringing on the law by uploading copyrighted MP3s, while

others receive music directly from the artist or the label for promotional purposes. With Songbird you can navigate to a MP3 blog and browse through all the MP3s that are posted on a page (the amount of available MP3s varies, but there is no limit to the amount). Similar to an RSS reader: you can choose what you like and ignore the rest. The main difference between Songbird and an RSS reader is not in the technology, but as of this writing very few musicians have sites that will easily allow listeners to subscribe to their music feed.

From Podcasting To Free Music?

Browsing and subscribing to audio files isn't a new thing. Apple started the concept of audio subscriptions when it first developed the podcast. Both amateurs and professionals produce podcasts - from bedroom journalism to the BBC – and the content spans almost every imaginable genre.

The most remarkable thing about podcasts is that they are all 100% free. To be specific, *free* is actually in Apple's definition: "a podcast is a **free** video or audio series — like a TV or radio show — that you download from iTunes and play on your computer, iPod, iPhone, or Apple TV."³⁴ With Apple's initial declaration of the podcast as "free", they have created a social norm in the industry. Podcasts remain free, and in fact the iTunes software prohibits charging for a podcast.

JapanesePod101 is one example of a business that began with a free Japanese language-learning podcast and since has transformed into a multi-national business. All of JapanesePod101's daily podcasts are available for free download – and in full - from the iTunes store. The company uses cross-subsidies such as an online Japanese dictionary, a forum where you can interact with the show's host and instructional PDFs designed to supplement each lesson.³⁵ Essentially, podcasts act as promotional materials that

³⁴ Apple <<http://www.apple.com/itunes/whatson/podcasts/>>, (accessed January 15th, 2006).

³⁵ In economics, cross-subsidizing means earning less on 'Product A' in order to promote 'Product B', where in the end overall

JapanesePod101 uses to attract new fans through iTunes. Once new listeners subscribe to the free podcast, the company hopes that the new listener will become a fan and pay for the full-feature subscription.

Could the potential of subscribing to music eventually blur the line between Songbird's *play the web* and playing podcasts? If so, could this transform the norm of paying artists for music?

IV. What Can Musicians Learn From Bloggers: Embrace the Connectivity and Join The Conversation

According to Charlene Li, effectively establishing an audience on the web requires joining the conversation. She explains that in real life you would never just walk into a room where people are talking and announce, "Hey look at me I have something to say". Instead, you first listen to what is being said and then join the conversation. Bloggers and Commenters (people who respond by leaving comments on blog posts) are very good at this, and they power the millions of conversations that are indefinitely permuted around the web. They understand that the web is a place where interacting and reacting to content is as important as consuming it. In Li's book Groundswell she gives examples from a handful of innovative businesses that have decided to join the conversation of the web by engaging with the needs of their customers rather than against them.

The critical factor in enabling conversation on the web is found in the freedom of the content being shared. The ability to freely share ideas on the web has been crucial for bloggers: it is free to start a blog, readers don't need to pay to read a blog, anyone can comment on blog posts and anyone can link to or repost a blog entry on their blog. Lev Manovich has elaborated on the subject with his

earnings exceed the cost. Wal-Mart does this by offering DVDs below cost in order to lure you into their store. They assume people will buy other products while in the store, thereby eclipsing the loss taken from the under-priced DVDs. - Chris Anderson, "Why \$0.00 is the Future Of Business." *Wired* (March 2008), 140-149.

perspective that "Often 'content', 'news' or 'media' become tokens used to initiate or maintain a conversation." Bloggers create, rewrite and repost these tokens, and the most successful blogs generate long discussions, which branch off into further discussion, which lead us rhizomatically into other conversations around the Internet.

Music as a token is a problematic case because there is uneasiness from both the artists as well as from the fans to freely post and share music. This sharing paranoia for artists stem from their fear of a diminishing revenue stream while fans are fearful of legal enforcement due to antiquated intellectual property laws. Embracing the idea of the musician as a blogger (or entrepreneur) facilitates better competition in the industry – the musician can then set their own price and decide whether to use a traditional copyright license or a Creative Commons license. Li refers to this decentralized uprising as a *groundswell*: "a social structure in which technology puts power into the hands of individuals and communities, not institutions".

In the music industry the groundswell has already begun as musicians have started releasing full-length albums as legal-free downloads. Radiohead is often credited as one of the first bands to attempt this experiment. In October of 2007 they released the album *In Rainbows* as a download-only release. They shocked the music industry by allowing customers to choose their own price, but gained the respect of their existing fans as well as new ones. The release was also well received by the media, earning Radiohead far more exposure than they ever would have garnered from a traditional album release. In addition to Radiohead, hundreds of bands are experimentally releasing digital copies of their music for free online.

In March of 2008, Nine Inch Nails released their album *Ghosts I-IV* in both priced CD and non-priced downloadable formats, asking for donations in any amount (including \$0) for the latter. Despite the album technically being available for free

download, Nine Inch Nails brought in \$1.6 million in donations and physical CD sales in the first week of releasing the album.³⁶ Other notable acts continuing the trend of free music include Saul Williams, Harvey Danger, The Charlatans UK and Black Kids. Harvey Danger, a band that formed in 1992 and gained celebrity status in 1998 with the single “Flagpole Sitta”, made the following statement regarding the free release of their latest album, *Little by Little*...: “Even with the proliferation of websites and magazines paying attention to independent music these days, it remains difficult for bands—especially rock bands—to get exposure, regardless of how good they may be (or how successful they once were). Making the record freely downloadable removes the main barrier that exists between an artist and the world of potential listeners. And we do mean world; the web’s reach is everywhere.”³⁷

VI. Conclusion

As digital music becomes more rhizomatic it becomes difficult for the hierarchical models to compete. Think of everyone who owns a digital track not only as a consumer, but also as a potential distributor. Considering the nature of digital audio, anyone who acquires a digital file can just as easily spread that file to friends or among the general public. For example, there is a large possibility that of the millions of people who own the latest U2 album many of those people will copy it one time and give it to a friend. If we were to plot each of these people on the Y-axis of a graph we’d see The Long Tail extend *extremely* far and narrow. In theory, the total amount of digital music being acquired through friends could exceed the total amount being consumed from the major distribution hierarchies.

Similarly, using the hierarchical models to fight the rhizome will always fail. Since 2003 the RIAA has opened legal proceedings against 35,000 people, but finally

36 Courtney Harding, “Nine Inch Nails Album Hits The Web”, *Billboard* (March 2008)
<http://www.billboard.com/bbcom/news/article_display.jsp?vnu_content_id=1003718389>.

37 Harvey Danger, <<http://www.harveydanger.com/press/why.php>> (accessed January 15th, 2006).

in December 2008 they realized the ineffectiveness of strategy and agreed to stop the lawsuits.³⁸ Alexander Galloway has emphasized the struggle of power between conflict diagrams: hierarchical vs. distributed. He points out a shift from "centralized, hierarchical powers" to "distributed, horizontal networks" and concludes that hierarchies have a "difficult time fighting networks."³⁹ Along the same lines, in *A Thousand Plateaus* Deleuze and Guattari warn of the rhizome, "You can never get rid of ants because they form an animal rhizome that can rebound time and again after most of it has been destroyed."⁴⁰

As music search engines and Songbird's *play the web* add more connectivity, multiplicities, and decentralization to online music, the future of online music will continue to mold itself to the distributed network of the Internet – and in doing so music will become more like the rhizome.

38 Sarah McBride and Ethan Smith, "Music Industry to Abandon Mass Suits", *The Wall Street Journal Online* (December 19, 2008) <<http://online.wsj.com/article/SB122966038836021137.html>>

39 Alexander Galloway, *Protocol*, (Cambridge: MIT Press, 2004), 170.

40 Gilles Deleuze, Félix Guattari and Brian Massumi, *A Thousand Plateaus* (New York: Continuum International Publishing Group, 2004), 10.