

HOW
MUSIC
CHANGED
YOUTUBE

▶ **GUILLAUME HEUGUET**

B L O O M S B U R Y

How Music Changed YouTube

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Guillaume Heuguet

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Introduction

When the dot-com bubble burst in the early 2000s, some venture capitalists bucked the market and continued to invest.¹ Among them was Sequoia Capital, an investment fund best known for backing Google. The firm waited and watched for a few months before entering into negotiations with the team at a video-sharing site called YouTube, which was already experiencing impressive user growth. Jawed Karim, Steve Chen, and Chad Hurley—the three founders of YouTube and PayPal alumni—knew from the start that video would be a game-changer: Karim had read an article about it in *Wired*. The team decided to experiment with the tools and formats already available. In a matter of weeks, they tried a dating site format via filmed portraits, a more comprehensive video storage server (the tagline read: Your digital video repository), and a Flickr/Delicious-style tool for aggregating digital videos of all kinds (upload, tag, and share!). Finally, they landed on a video publishing tool that allowed anyone who shoots or edits video to showcase their work and hopefully find an audience (Broadcast Yourself!).

Two decades on, according to a recent MIDiA survey of American audiences, 55 percent of consumers watch music videos on YouTube, compared to 24 percent who say they listen to music on Spotify. Criticized for paying too little to rights-holders, YouTube does not hesitate to point out its comparative advantage, pointing out that one-third of the revenue it gives out to copyright holders comes from the distribution of music tracks in videos produced by third parties.

Given the prominence of YouTube for contemporary music and the music business, it's easy to assume that it sprang up overnight as the result of a few initial good ideas and positive circumstances. Rather, it was the result of a long, tortuous process of trial and error. In fact, if we take a step back, we're prompted

to take a very different view of the usual story of YouTube as a technological innovation that revolutionized music culture. This book is interested in exploring that reverse thesis: that is, how music played a crucial role in shaping what YouTube is. *How Music Changed YouTube* looks at how music has helped shape YouTube as a device and a platform for music publishing, listening, and media consumption in general.

In fact, if we look at the background to YouTube's creation, it's clear that that music played an important role in its emergence, stabilization, and success from the outset. At the time YouTube was launched, the peer-to-peer file-sharing pioneer Napster had just shut down. Its competitors were also closing one by one, and MySpace, the main destination of the music Web at the time, was experiencing multiple technical setbacks and a growing disaffection amongst its users. Music-lovers were looking for new ways to share files, while record companies were looking for ways to regulate the distribution of those files and, after a long period of disdain, commercial outlets for digitized music. As music helped launch YouTube, two dynamics could meet: the construction of a technical and media innovation on the one hand, and the adaptation of a set of musical formats and musical practices to an Internet-based media environment on the other. This book takes up the challenge of examining the intersection of changes in the way music functions online and the platform offered by YouTube, questioning the meeting of these two trajectories, and locating crucial moments and places in this intertwining. It aims to illuminate a key episode in the digitization of music, while offering a grounded and sometimes counterintuitive perspective on the relationships between music and platforms.

By focusing on the relationship between YouTube and music, I seek to bring to light a number of parallel and interconnected stories. The first is the capture of digital music formats by a dominant player in the Web economy, which follows the established trend of technology entrepreneurs reaching into music markets to popularize their own devices and build the value of their patents. It situates YouTube within a broader movement of the micromaterialization of music and the corporate lock-in of devices for playing and editing music (Chapter 1).

From there, I consider the evolution of the relationship between recent strategies of media capitalism and historical cultural industries, particularly the music industry. The major players on the Web regularly suggest a scenario in which their tools are supposed to disrupt the game, democratize the means of distribution, and usher in a new world in which authenticity and spontaneity align with global popularity. In the case of YouTube, we will see that the users themselves were initially happy to play a part in this narrative, but that the old guard of cultural industry monopolies quickly followed suit, helping to sustain the development of the very project that otherwise claimed to marginalize them (Chapters 2 to 4).

Finally, I will turn to a perhaps less familiar story: the construction of a new infrastructure for music copyright and the music economy. Through the symbolic and technical framing of promotional activities, as well as the introduction of new copyright control tools and audience measurement criteria, YouTube has positioned itself at the forefront of a specific market for music based on streamlined video publishing, content filtering, and advertising. Thus, while claiming to provide only logistical support and other neutral technical tools to its contributors (“creators”), the company participated in redefining the values of music in public culture. In this respect, YouTube not only evolved through its mobilization of elements and practices from (online) music cultures, but has also affected the very existence of music, at least as far as the practices on YouTube are concerned (Chapters 5 through 8).

The research behind the analysis in this book is based on a mix of disciplines and methods that I used in a first period of six years of initial research, from 2012 to 2018. My main background is in media studies, and more specifically in the sociosemiotics developed at GRIPIC (Sorbonne University) by people like Yves Jeanneret, Emmanuël Souchier and Adeline Wrona. This approach focuses on the cultural analysis of digital media/software and the social conditions of interpretation, and connects to work done elsewhere by Lev Manovich or Maria Eriksson, to name only two.

An important corpus for this work consisted of every day of the YouTube.com homepage in the period from 2005 to 2009. I accessed records of these pages thanks to the database offered by the Internet Archive through

the interface of The Wayback Machine, with some cross-checking with the INA's Archives du Web in Paris. With YouTube's turn to "personalized" homepages, I looked at a wider range of screens and tools designed by the company, from YouTube for Artists to YouTube Mix. I also read extensively the YouTube blog and its offshoots, and followed the coverage of YouTube in both the mainstream international dailies (*The New York Times*, *Le Monde*) and the specialized press (*The Verge*, *Techcrunch*, etc.).

The chapter *The Hit Machine Narrative* discusses in more detail the advantages of a sociosemiotic approach to analyzing music videos and their meanings in a digital context. The chapters *Competing for fun* and *The Streamlining of Expression* draw on cultural studies and popular music studies, as well as the pioneering work on YouTube by the scholars who have contributed to the volume *The YouTube Reader*, and Jean Burgess and Joshua Green's book *YouTube: Online Video and Participatory Culture*. Between the writing of this book and its publication, researchers such as Stéphane Constantini, Michael L. Siciliano, Jeremy Wade Morris, Michael Spanu, and Nancy Baym have bridged the gap between YouTube's positions on music making and music promotion, which I discuss, and how musicians and labels engage with the platform in practice. There is, of course, a whole field of research to be pursued here, especially in articulating YouTube's normativity with situations and experiences that depend on, but are not limited to, class, race, gender, and geography. The final two chapters, on copyright control and audience measurement, draw mostly on sociological economics and science and technology studies. Finally, the reception of the French version of this book has highlighted the influence of more traditional strands of critical theory. Michel Foucault's genealogical approach to the relations of knowledge and power, as well as Adorno's and Benjamin's dialectical thinking about culture under the influence of technology and capitalism, have indeed left their mark on this work.

From Music Boxes to the YouTube Player (2000–05)

The media discourse on digital music innovation often focuses on the business ideas of entrepreneurs and the interplay of market forces, leaving out discrete but crucial design decisions. In this chapter, I will follow the inspiration of science and technology studies scholars such as Jonathan Sterne and Jeremy Wade Morris, who have emphasized the importance of multilayered studies of formats and devices. I will consider the micromateriality of music software to understand the dynamics of change in music culture and economy. This is not a way to return to a deterministic account of the power of technology, but, on the contrary, to emphasize how technical objects are themselves shaped by contradictory aesthetic, economic, and cultural logics, even when, in retrospect, they appear to be the result of a process of natural selection and evolution. I will thus show how YouTube has made the most of collective labor on recording formats and software to strategically reconstruct ways of storing, displaying, and playing music online. In the process, a branded and optimized video player has become a critical asset that has allowed YouTube to attract Internet users and take control of audiovisual document and data flows.

The Emergence of Online Listening

According to Steve Collins and Sherman Young,¹ given that music was already stored in binary code on compact discs, it was predestined to be transposed into the digital environment. They even suggest that music was the perfect guinea pig for many technological innovations. A closer look, however, reveals that this explanation is insufficient: the inscription of sound recordings into

the framework of data processing and networks had to face several obstacles. At the beginning of the 2000s, all the stages of sound transduction had to be translated into hardware and software systems. The personal computer had to become a “multimedia machine” and to feature a CD-ROM player ready to play soundfiles. It would take some time for sound files to regain their value as documents and resources in their own right in the digital environment, and particularly before they were supported by a variety of websites designed for publishing, listening or sharing music.²

In this reformation of music’s material culture, the software for playing (or listening to) sound and video files has played a major role. The ordinary and stereotypical character of media players corresponds to their underlying complexity: they are designed to make us forget their conditions of production as well as themselves – they are supposed to be ‘seamless’. This listening and viewing software was initially part of the kit that came with the purchase of a computer. Other software was distributed as freeware or based on open-source elements. Stand-alone software can be reserved for sound formats, such as Apple’s iTunes, or it can play sound and video interchangeably, such as the “classic” devices that were Windows Media Player (Microsoft), Quicktime (Apple), or Real Player (Real Audio). Jeremy Wade Worris emphasized how a player like Winamp, published by a company called Nullsoft, referred to three different media situations and practices: audiovisual programs and the experience of flow associated with the television set;³ the computer as a versatile, multimedia machine that also served as office equipment; and turntables and audio systems that implied different listening postures, from dedicated, focused appreciation to distant consumption. With its syncretic design and skeuomorphism, Winamp helped to give music back its dimension as a discrete object, to make a music file not just a degraded copy of a tangible ‘original’, but a music recording in its own right, making it something that could be manipulated and valuable in a computer environment.⁴

After Winamp and the various desktop media player initiatives, some software engineers, Web developers, and commercial software publishers tried to bring this functionality to the Web. Casual and professional Web developers began by imitating the forms and functionalities of desktop players to reinvent them as small widgets⁵, often in the Java language. They let them flourish on

Web pages, alongside small modules for displaying weather reports or stock quotes, foreshadowing mobile applications. To save programming time, they constantly exchanged code snippets and tips. The archives of their blogs show their trials and tribulations. Often, they showed themselves to be as much concerned with the idea that technical optimization can only go one way as they were with a broader poetic approach to code, wanting to make the most of the range of possibilities offered by different programming languages and standards.

At the time, their discussions centered on the proper way to display and play sound on Web pages. They were experimenting with the replacement of files that had to be downloaded before being played on a desktop player, with simple links that were visible in small players embedded in Web pages and could be activated through the Web browser. These experiments considered aesthetic, economic, and technical criteria. The community debated optimal compression rates, the best way to embed the source code in pages (via autoplay when the page loads, or via playback that requires the user to click buttons that mimic, for example, the iPod interface), the adaptation of HTML tags to Netscape or Microsoft browsers, and the choice between HTML features and third-party environments available as plug-ins, such as Active X (Microsoft) or Flash (Macromedia). Macromedia's Flash MX suite and its .SWF format—proprietary but free to use—marked a turning point, giving site editors a standard (available on 98 percent of machines⁶) to get around the compatibility problems posed by the HTML tags that typically generate players in browsers. Once standardized and integrated into development routines, Flash-based music players proliferated as ready-to-copy snippets of code on specialized websites, then as modules that users could add with a few clicks from within the leading online text-publishing tools (such as Blogger). In making this easy, the publishers of these sites and tools were all following the advice of author and consultant Nat Torkington, who, in a short insert in Tim O'Reilly's Web 2.0 manifesto entitled "A Web 2.0 investment thesis"⁷ put forward the idea that "the successful companies all give up something expensive but considered critical in order to get something valuable for free that was once expensive". This principle offers a good description of how the logic of freeware and freemium would continue to expand with the strategies of free-access platforms that cover their costs by exploiting user data.

The Invention of the YouTube Player

Although there were some early experiments around video, the emergence of Web media players happened first and foremost around music. Between 2005 and 2010, many so-called MP3 blogs and aggregators such as Hype Machine became the main force in online music media.⁸ Alongside peer-to-peer software and a site like MySpace, they were presented in the specialist and general press as the realization of the Web's promise of access to culture, while at the same time becoming a new emblem of so-called piracy.⁹ For their part, marketing experts began to assess their usefulness in generating word-of-mouth buzz,¹⁰ and labels began to negotiate with bloggers to release exclusive singles. On what became audioblogs, music players began to replace rather than add to the MP3 download links: by making the music available without offering it as a downloadable file, they came to represent a compromise between making the music widely available and maintaining a certain scarcity that would allow record companies to continue selling the files on online stores like iTunes.

In this landscape, while YouTube's designers drew inspiration from pre-existing sites such as the photo-sharing site Flickr,¹¹ the association of personal profiles with a "portal" framework, as well as the structure of the name (You/Tube), was immediately reminiscent of MySpace. The site, owned by Rupert Murdoch's News Corp, was one of the most visited at the time and one of the first important destinations for music media.¹² Like MySpace, YouTube offered Internet users the opportunity to access video-publishing tools. On another level, YouTube differed from MySpace in that all of its paths led to the media player, with the little arrow of the playback function even serving as the logo for the YouTube brand.

YouTube's designers were not content with making the player the centerpiece of the site. The embed code was placed on the site's pages, inviting users to make the recordings their own by copying them from one site to another. Despite its notorious technical flaws, MySpace had generated a rapprochement between the copy-paste of bits of code, the exchange of recordings, and self-expression or communication online.¹³ But this deportalization of documents through copy and paste was also in line with the PayPal button (linked to the