SCIENTIFIC ARTICLE

On-demand streaming services: listening as an experience and experimentation

On-demand streaming services: escuta como experiência e experimentação

Rodrigo Fonseca e Rodrigues

Universidade FUMEC, Belo Horizonte, Minas Gerais, Brazil rfonseca@fumec.br

Astréia Soares Batista

Universidade FUMEC, Belo Horizonte, Minas Gerais, Brazil astreia@fumec.br

Abstract: This paper discusses the listening experience provided by on-demand music streaming services and some of its aesthetic, cultural, technological, and economic implications. It also presents the concerns of performers and authors regarding the changes introduced to listening habits since modern times, the coexistence of analog media under the auspices of the content production industry, and the contemporary omnipresence of digital music. On-demand music streaming services stand as the hallmark of this era, by offering convenient access to music collections, customized playlists (scrobbling) integrated with social media, intuitive user interfaces, and, in some instances, the possibility of searching for and posting original content. Nonetheless, implicit constraints such as controlling for and blocking unlicensed files and supposedly restricting amateur musical creations and interventions have been implemented. The convenient, yet heavily mediated, listening experience provided by ondemand music streaming services should be rethought as a potentially creative instance of the "micropolitics of experimentation."

Keywords: musical listening experience, music industry; music streaming services.

Resumo: Este artigo problematiza a escuta musical ligada à experiência com os atuais *music on demand streaming services* em algumas de suas implicações estéticas, culturais, tecnológicas e econômicas. O texto apresenta as preocupações de artistas e pensadores a respeito de mudanças que surgiram para os hábitos de escuta desde a modernidade, do convívio com as mídias analógicas sob a rubrica da indústria de conteúdos até a onipresença contemporânea das mídias digitais. Apresentam-se como sintomáticos os aplicativos de *streaming service*, que oferecem uma comodidade de acesso por assinatura a seus catálogos, *playlists* personalizadas (*scrobbling*) e integradas a redes sociais, além de um *design* de interface voltado para uma interação intuitiva e, em alguns desses serviços, a possibilidade de pesquisar e de divulgar trabalhos inéditos. Em contrapartida, observam-se constrangimentos implícitos em sua frequentação, tais como o controle e o bloqueio de arquivos não licenciados e uma suposta restrição da prática amadorística de criação ou de intervenção musical. Atraída ao consumo confortável, porém fortemente mediatizado sobre as expectativas iniciais de liberdade de acesso e compartilhamento na cultura musical *online*, a experiência da escuta sob a lógica dos *streaming services* merece ser repensada como uma potencial "micropolítica de experimentação".

Palavras-chave: experiência da escuta musical; indústria fonográfica; music streaming services.

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1 - Introduction

Until the later decades of the 19th century, the act of listening to music was limited to occasions in which audience and performers shared the same physical location to listen to/perform the then current repertoire, usually as part of a scheduled event. Examples range from civic and religious encounters, fairs, concerts and parties, cultural gatherings and soirees, to solitary performances by professional or amateur musicians and singers. The fast-paced development of science and technology observed in modern times, and the launch of audiovisual reproduction and broadcasting systems in particular, introduced disconcerting changes to the cultural and musical experiences. ¹ In fact, the production, recording, and broadcasting technologies popularized in the 20th century have led the competencies inherent to listening to music to incorporate the conditions required to deal with a different set of sensorial and mnemonic experiences.

With the substantial growth seen in the use of the Internet starting in 1995, the experience of listening to music was integrated into a series of novel cultural activities deemed technologically impossible in a world until then bound by analog media. A non-exhausting list of examples includes buying digital music on iTunes; searching for, uploading, and downloading music from torrent sites, file-sharing services, or through peer-to-peer applications and blogs; listening to internet radio stations; posting or accessing music streams on social networks, web pages, or applications; and, more recently, accessing on-demand servers (offering ubiquitous access to music wherever one is). The new conditions of production, reproduction, access, and circulation of music in the online world have significantly affected the reception, consumption, interaction, the interfaces, and the physical and cultural mobility of music, while affecting the entire experience and reshaping the aural, sensorial, intellectual, and creative dimensions of the act of listening to music. For example, consider how much music sharing, virtual communities, online chatting, discussion lists, performer web pages and themed sites have impacted the creative experimentations of DI's; or how Napster opened the floodgates of digital music onto the production of remixes, bootlegs, and mashups; or how mp3 music and p2p file sharing amplified access and exchange possibilities.²

These events may be construed as troublesome in view of the different shapes the listening experience assumes before traditional (analog) and recent (digital) devices used to enjoy music. Some habits of relevance to music culture, at least initially, set a footing outside the legal boundaries of the music industry and changed the listening experience in unique ways. P2P sites, blogs, social networks, and websites fostered the cross-pollination of ideas, experiences, and actions, to generate the grounds on which new forms of listening to music and promoting, through amateur means, a creative consumption music culture could flourish.

¹ As a reminder to the reader of the audio devices that have driven different modes of listening to music, the authors cite the phonograph (1887), the gramophone (1899), the record player (1917), the home (1920s) and automotive (1960s) radio systems, the reel-to-reel tape recorder (1935), the portable sound system (1960s), the Walkman (1970s), the CD player, the micro sound system, computers and laptops, the iPod, tablets, and smartphones. Motion pictures with synchronized sound (1925) enabled the creation of genres such as the audiovisual phonograph and jazz shorts in the 1930s, both pioneering experimentations, along with musicals (also in the 1930s), short music films (1949), and music videos (1956).

² *Soulseek*, an application that allows registered subscribers to download music, audiovisual, and text files from each other, is an example of the person-to-person, peer-to-peer, or P2P architecture. Reciprocity is the informal regulating principle in effect within the app's community: download from others and let others download from your collection of files. Access to the website is free of charge; the service is funded by voluntary donations.

The early possibility of having free access to music – be it in its original format, remixed, or processed in a sampler – and theoretical, technical, or journalistic information from file-sharing sites to then intervene creatively upon them was quickly threatened by litigation and technological controls to copyrights in the form of a "war on piracy." With on-demand music streaming services such as <code>Lastfm</code>, <code>Spotify</code>, <code>Deezer</code>, <code>Napster</code> (now in a licensed commercial version), <code>Justmusic</code>, <code>SongFlip</code>, <code>SoundCloud</code>, <code>Radiooooo</code>, and <code>Apple Music</code> to name a few, one might wonder if there is still room for amateur cultural practices that allow the musical experience to renew itself in face of the habit of listening to music online.

2. The listening experience and cultural mediation in the 20th century: music and the music industry

Frankfurt School philosophers T.-W. ADORNO and M. HORKHEIMER (1977) wrote that in modern music production the entire process was controlled by the music industry, from the selection of performers and their repertoires to the stages of distribution and the advertising and marketing strategies. Moreover, the authors stated that the culture industry also determined the spatial and temporal dimensions required for the enjoyment of music, imposing reception conditions such as the proper places to listen to it and the expected length of each track in a record. The listening frameworks defined by these arrangements yielded a lesser aesthetic experience. According to the authors, music would be lowered to the status of background sound or an ornament to the noises of the day, and listening would yield only to catharsis or "epidermal" listening, as would the listener's consciousness under the effect of a soporific drug. Under the identification and cultural consensus strategies devised by the discourse and agency of the culture industry, minimally responsible musical contemplation becomes impossible, once spaces and devices were designed to provide for distracted listening. And as T.-W. ADORNO (1975) concluded, uncommitted listening does not pose aesthetic challenges to the listener.³

In the early decades of the 20th century, music writers involved in discussions on listening began to consider the universe of listeners and listening spaces, both made more scattered and fluid by the advent of the new technologies of modern times. Musicians began to share their knowledge with scientists from physics and acoustics, psychology, semiotics, theory of culture, the arts, literature, and cinema, and incorporated novel circumstances under which their works could be listened to. Erik Satie, and a little later Edgar Varèse and John Cage, shared the idea that listeners could find myriad things beyond the so-called "concentrated listening" advocated by Adorno.

³ According to ADORNO (1975), the contemplation of music is rendered impossible due to the lack of education contemporary men have on listening and understanding musical language and its aesthetic implications. The establishment of distracted listening and the effort to reduce listening to a momentary pleasure serves as pretext to release listeners from the task of thinking about a musical piece in its entirety, thus performing "adequate listening." Listeners comprehend only isolated details detached from the organic whole of the musical piece. Distracted listening makes it impossible for one to apprehend the musical piece in its entirety. Listeners should, otherwise, be cultivated enough to follow the synthetic unit of a musical piece, which would eventually be sacrificed into a few incomplete moments.

Writer, musician and essayist Alejo CARPENTIER (2007) has looked into the supposed advantages and the mystification of the music culture produced by the advent of records and the music industry system since the 1920s, and posited that the musical experience suffered from the consequences of music produced to suit the purposes of powerful economic processes. He often tried to comprehend the issues arising from the reproduction and distribution of music under the auspices of the culture industry and the impact these issues had upon one's cultural listening habits. The author warned that records were a threat to human contact – referred to him as the "collective rhythm" established between performers and listeners.4 However, by asking ¿de cuántas obras venimos a enterarnos gracias a la grabación fonográfica?, he pointed out that records should be recognized as one of mankind's formidable achievements. Still according to CARPENTIER (2007), one can listen to a given musical piece thousands of times, anywhere and at any time. Records, he concluded, are a ruthless filter against which not every musical piece survives. The culture of long-playing records has created, in its own ways, new rituals to the listening experience: a song listened to on the radio may prompt one to search for the album or the performer. At the record store, the individual browses through many albums until he/she finds the desired record, often picking a few more, to then take them to the acoustic booth, put on the earphones, and listen to some of the tracks before selecting which albums to buy.

In his considerations on the music culture of LP records, Walter BENJAMIN (1975) postulated that the technical imperative introduced an ironic advantage to the ways music can be experienced, not only due to the different possibilities of listening to music, but also to the original music creation methods stemming from novel playing and recording devices. The perspective of the critical theory developed at the Frankfurt School indicates that despite the exponential growth seen in the access to works of music, to information on musical pieces, and in the connections between listeners, the online music listening regimes still reduce music culture to a limited set of directed activities. Is it possible to prevent the extremely saturated streaming music frameworks – deployed according to principles of convenient consumption and technological control – from driving the creative aptitude of listeners into a creative meltdown? Or yet, bearing in mind what Benjamin wrote, could other advantages ensue, even if ironic, for creativity in listening?

⁴ Walter BENJAMIN(1975) was the first to write that the recording, reproduction, and broadcasting of music expanded the opportunities for the enjoyment of music, while lowering it to the status of a traditional form of contemplation. The inflation of sound signs and the excessive exposure to music one is imposed upon anywhere one goes and in different social contexts have contributed to the dissolution of the cult and the ritualized demand for concentration inherent to the traditional experience, while clouding its former aura and cladding it with a new symbolic discursive mediatic mantle – a new aura wrapping the musical experience. While elaborating on this idea, Alejo CARPENTIER (2007) stressed the relevance of the discipline imposed upon music lovers and the atmosphere of devotion when contemplating a work of art: the fact that one ought to dress up, observe the time, travel, buy tickets, and arrive on time for a concert. These factors combined stir collective emotions and enthusiasm before a musical performance, which confer concerts the character of an artistic ceremony, a ritual, mutually interfusing the emotions of audience and performers. According to him, this experience can never be fulfilled with a record.

⁵ Benjamin's statement may be exemplified by the invention of *groove*, a resource used by non-musicians making music in which a scratch is made in the track of a vinyl record at the point where the song moves from one chorus, stanza, phrase or bar to the next, to make the needle skip to a groove made at the point where the chorus starts, thus creating a loop. And so the turntable and the needle – until then parts of a playing device – were turned into a new "instrument" that allowed the mnemonic construction of a rhythmic flow of a different nature and the creation of a new conceptual procedure to organize the sounds of popular music, which quickly moved into various musical genres such as rap, pop, and electronic music.

⁶ YouTube's nearly endless selection of audiovisual files (currently facing restrictions imposed by copyright law) may be viewed as a remarkable example of the different experiences created from the contact with listening. Performers exchange information, create jointly, share their ideas, post tutorials on ways of playing their instruments; access is given to interviews, making-offs, performances, and concerts; DJs search for pieces for their collages. YouTube's gigantic collection also made it an important tool for historical and desk research. One of the most interesting developments in the revitalization of the audiovisual search engine is the strategy of posting novel musical pieces on it, which

3. The listening experience in times of on-demand music consumption

Discussions concerning music listening in times of online digital platforms cannot afford to leave out the issues associated with technologic and legal control, which after years of relative freedom of access, were reset to refrain listeners from sharing and potentially engaging in creative activities involving the access to music files. The copyright law from the decades in which music was recorded onto analog devices – such as the LP record – was able to control the access and distribution of music almost entirely. Only interpersonal exchanges could not be tracked down.⁷

When writing about the habits pertaining to the act of listening of the period, composer Paul LANSKY (1990) reminisced that in the 1970s and 1980s, listening, divulging, and sharing had a decisive impact on the music culture. He named these practices "sound-giving." In social vitality terms, sound giving carried active implications with it: once the recipient was affected by the sensations triggered by listening to the given music, he/she would share it forward with someone else. The music industry was violently shaken in the first years after the introduction of digital technology. Shockwaves were felt in the control over the sales, rights, and royalties that sustained the prosperity of publishing companies and record labels. This period coincided not only with the "war on piracy," but also with a lively amateur creative music scene and the birth of remixes, mashups, and bastard pop compositions and songs. Further expanding the libertarian atmosphere that pervaded the Internet, person-to-person sites, access websites, social networks, and blogs allowed listeners to venture into searches for the music they wanted to save, share, and listen to. Since then, the music industry has responded with extensive litigation and massive political pressure, though with mixed results. Technology-based control mechanisms followed. Every work of music is currently registered online, and every copy is granted, by their publishers, an internal code to identify, trace, and record online download and upload events. Someone – a DJ, for instance – wishing to publish their creative interventions on songs and compositions can no longer post their creations on websites offering access to music. The code present in the music files instantly blocks the upload process. Strategies devised to acquire new consumers of music have included music listening applications housed in mobile devices offering access to publisher databases of songs and compositions along with continuously customized metadata-based playlists (scrobbling): every time the subscriber searches for a performer or song, he/she is sent links to songs deemed similar to his/her preferences or to the taste of other listeners making similar searches.8

Lawrence LESSIG (2009) described the situation faced by John Philip SOUSA (1854-1932), the man who invented the Sousaphone in 1906, when he protested against the growing use of player pianos and gramophones, on which his pieces were played without legal of financial

has made YouTube a source of reference for newly launched musical pieces.

 $^{^{7}}$ Cassette tapes were introduced in the 1970s. Instead of fighting their limited capability of copying music, the music industry fully embraced the technology and incorporated it as part of the business.

⁸ Spotify, a music streaming service platform launched in 2008, carries millions of songs (publishers let go of a portion of the copyrights to make the service more affordable and increase the platform's customer base). It uses the "freemium" strategy, in which non-paying users are offered free access to music intercalated with ads and paying customers are given the Premium version of the service, which includes nonstop music and customized playlists integrated to social networks. Another example is SoundCloud, a music streaming service platform that links user playlists and allows musicians to divulge the music of other performers and post their own compositions onto the platform for others to enjoy. Recently implemented digital licensing control measures block attempts of uploading remixed songs with stretches of other songs protected by copyrights.

consideration to the composer. Sousa was profoundly bothered with the significant atrophy he saw on the practice of music by amateurs: when offered more convenient means of listening to music, people would not be motivated to learn to play an instrument, even at a modest level of proficiency, and would lose the interest in getting together to play musical instruments or sing, for example.

To Henry JENKINS (quoted by LESSIG, 2008), the history of American arts in the 19th century may be defined in terms of "mixing, matching, and merging" the traditions of indigenous and immigrant populations. Jenkins' remarks call for an interesting observation: the underlying logic of copyright protection in the centuries before the introduction of the phonograph did not include tracking down and identifying, at the level of each individual author, the collective practices that mixed and remixed diverse ideas, rhythmic and melodic phrases, harmony and tempos, tone and expressive resources, which later crystalized into different music genres.⁹

To Sousa, a professional musician himself, the virtue inherent to the status of being an amateur musician did not lie in the quality of the music they were able to write, but on their participation in the music culture: the love for music, the enjoyment of recreating it, and the respect for the pieces they played. Sousa feared that music playing devices would make the amateur culture wither and turn listeners into consumers of culture instead of producers. As a consequence of the shift toward consumption, fewer people would have access to musical instruments and the ability to create or add to the culture surrounding them. More and more listeners would become mere consumers of things created without their input. (LESSIG, 2008, p. 25)

On this issue, LESSIG (2009) outlines and connects two basic modes of cultural transaction in effect before the advent of reproduction technologies: the read/write culture and the read-only culture. In the realm of music, the first mode allows listeners to add something to the culture they consume, by either creating or recreating the cultural material surrounding them. The second, by its turn, inhibits amateur practices and creativity by promoting the convenience of simple consumption. The processes in place since the introduction of reproduction technologies, the establishment of a culture industry in modern times, and the more recent onset of online digital technology have seen to the fall of the read/write culture and the rise of the read-only culture.

Copyright regulations that free up amateur creativity combined with the machines and technologies of music production and reproduction might give the read/write culture a fresh breath of air. The industries that currently dominate the production of culture could, if they wanted to, offer significant growth opportunities for both professional and amateur artists while benefiting all the parties involved with the two forms of creativity.¹⁰

To a certain extent, the player piano, the phonograph, and the gramophone were the first instances of

⁹ To a certain extent, the player piano, the phonograph, and the gramophone were the first instances of what one might refer to as on-demand music. Player piano makers held catalogues of piano rolls featuring popular songs, and a still incipient music industry expanded its offerings through phonograph cylinders and 78-RPM records.

¹⁰ According to Lessig (2008, p.109), the emergence of an enterprise that promises extraordinary economic opportunity, categorized by him as "hybrid." The same technology used to strengthen the read-only culture could also encourage the rebirth of the read/write culture. A hybrid economy supports the defining principles of a real industry of culture and innovation.

4. Listening experimentation as micropolitics

In order to comprehend at a first glance the issues addressed in this section, one has to consider that there is an ethos of micropolitics in the engagements between music listening and composition and other types of listening. The ideas of Michel FOUCAULT (2002) served as the basis for the proposition of an "ethics of existence." According to Foucault, social contemporary planes contain flows of consumption, art, science, computer networks, opinions, etc. He offers valuable insights into the matter: "These flows are constantly modulated as a function of an axiomatic assertion, thus allowing media powers to participate in the subjectification processes to the point of dictating their rhythm" (FOUCAULT, 2002, p.195). Thus the "flows of technology," as the author described them, become ever more important in a stereotyped regime of affection for having acquired the power to interfere with the virtuality of flesh.

The micropolitics of existence – extended to the experience with art – comprises, therefore, experimental investments that may take the forces of the flows of technology to places farther than the control axiomatic assertions used to program them. The author complements the definition of micropolitics by viewing it as a set of insurgent practices devised to reinvent the ways of acting in, imagining, and experimenting a singular ethos. The micropolitics of existence in the habits of music listening may, therefore, be seen as a type of silent "guerilla" capable of unraveling the clichés the industry imposes upon current consumption processes. Exercising micropolitics is somewhat equivalent to exercising the affirmative power of existence in the immanent struggle between our actions and the power systems of technology, media, and culture, in an attempt to be a split second ahead of the dominant axiom.

In other words, one is always capable of listening in different ways and thinking about one's own existence and the connections it holds with the worlds of culture and music and the different ways in which they are reinvented. And even without realizing, the listener may activate, through his/her affective habits toward music, ways of listening that foster different forms of creation. The experience with art and its experimental possibilities comprise, therefore, a kind of implicit resistance to stabilized regimes of expectations, identification, and taxonomy, a fact that shifts this discussion to a field characterized by speculative questions. However, an inference one is forced to consider is that listening could be much more than hearing a sound, capturing morphosyntactic elements, or recognizing melodic phrases, harmonic tempos, rhythmic combinations and timbre textures. Listening does not involve sound alone, nor is it purely an auditory act; it comprises different modes of apprehending reality. It encompasses much more than just the physical, interpretative, semiotic or cultural dimensions. Listening can be an experimental, inventive act, a type of differential operation applied to what is being listened to. Therefore, experience and experimentation coexist in listening. Before assuming possible explanations concerning the dimension of experience memory, perception, intellectual apprehension – listening may be thought of as an act based primarily on non-semiotic affection, sensation, and experimentation, with incommunicable connections and micropolitics, intertwining and weaving our lives and music together.

The unpredictable actions derived from singular encounters in the Internet drive listeners to create "rhizomatic" possibilities of exchange, in a communicative process that promotes the contagion of affections, "eurhythmies," and of an ethos, thus exercising the micropolitics

between different types of listening. Contemporary listening culture may immanently adopt an ethos to its practice, an exercise inseparable from an ethics of existence; and experimentation may help one's listening find resonance with the listening of others. The micropolitics of existence, and the negotiations and positions adopted implicitly by one's actions, possibly find echo in the micropolitics of listening in the resistance against axioms crystalized by dominant habits. And the unspeakable power of music intrinsically moves listeners through an inextricable oblique ethos, by empathetic, often incommunicable, contagion.

5. Final Considerations

Despite the significant growth observed in the ranks of online music listeners – more than 800 million people are currently on music streaming platform Spotify – music culture, albeit in smaller numbers, is still manifested in other shapes and forms. Think of collectors of analog audio media (such as vinyl records), and the appreciation of a given album as thought by the performer and producer in terms of the order of the tracks and the criteria used to define which songs would be on which side of the LP record. Another factor worthy of consideration is the fear expressed by SOUSA(quoted by LESSIG, 2009): once trapped by the convenience of ondemand music consumption and its seductive array of user interfaces and services, one might feel demotivated to develop one's creative aptitudes, thus impoverishing one's cultural experience with music. Conversely, a huge inflow of uploads made by solo performers, bands, DJs, and producers, has been observed in the streaming services in which this feature is offered. This is confirmed when users of the service search for a song, including the original and other known versions of it, and are shown a list with a number of professional and amateur performers.

However, this is apparently the twilight of the free unpaid music exchange era, in which listeners have been able to rekindle their creative experience with music and provide others with novel listening experiences in the form of unique musical interventions. Before such circumstances, one might wonder, on the other hand, if the same technology used to shape the on-demand listening experience might, as pointed out by Walter BENJAMIN (1975), ironically stir up aesthetic concepts, cultural practices, experimental user interface designs, and creative online modes of interaction, thus making the listening experience more akin to experimentation.

To sum up with this short digression, when abandoned by our cultural resources and mnemonic and intellective skills while in contact with an idea or fantasy manifested in sound form, we see how music can lift us from a comfortable experience and mysteriously affect us. And it is this feeling of helplessness before the abandonment of our memory and perception skills that makes us feel, think, act, and listen differently. One might wonder if, despite the inescapable conditions that shape the on-demand online listening experience, certain modes of interference might restore the encouragement of creative micropolitics over the listening culture of a time in which our ever more equipped musical habits are diversified, scattered, and disperse.

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Note on the authors

Rodrigo Fonseca e Rodrigues is PhD in Communication and Semiotics (PUC-SP, 2007), Master in Social Communication (UFMG, 2002), Graduate in History (UFMG, 1999). Professor in the Master Program in Contemporary Cultural Studies; and in the Master Program in Systems of Information and Knowledge Management in the Universidade FUMEC. Co-editor of Revista Mediação. Author of the books *Música eletrônica*: a textura da máquina (Annablume, 2005); and A Escuta e o virtual: sonoridades on-line (NEA, 2015).

Astréia Soares Batista is PhD in Sociology (UFRJ, 2006), Master in Sociology of Culture (1993) and Graduate in Social Sciences (UFMG, 1981). Professor in the graduate courses in Journalism, Advertising and in the Master Program in Contemporary Cultural Studies in the Universidade FUMEC.