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Headphone listening cultures: contingencies and crossings

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Abstract. This paper discusses the headphones as key factors in the establishment of a mobile listening culture by suggesting that the function of this artifact has been changing according not only with technological innovation, but also with economic contingencies borrowed from capitalist logics. By discussing concepts such as tympanic function (Jonathan Sterne) and Commodity Scientism (Thimoty Taylor) the text will examine theories on the origins of headphones, as well as analyzing early models. The Walkman, launched in the 1980, will be the subject of a detailed scrutiny, since it is responsible for linking the consume of audio equipment with the urban life. Afterward, the article will confront a handful of texts discussing mobile listening fostered by the Walkman but extended by subsequent portable audio products such as the Apple's iPod. In the contemporaneity, the headphones underwent a process of stylization and have achieved the status of a fashion accessory. On the other hand, they are being implemented in interactive audio narratives such as games and smartphone applications. Locative audio will be discussed as an experimental field envisaging future functions and features for the headphones.

Keywords: Audio Culture, Headphones, Walkman, Audio Portability.

1. INTRODUCTION

The changes that mobile music brought to music consumption and society are mainly related to the launch of the Walkman and its successors, such as the iPod. Often overlooked, the headphone plays an important role in this history, being the part that allows the private listening in public - one can be "mobile" with a big stereo, but never sound isolated without a pair of cans.

Even without a systematic study of the headphones, this article finds its presence in different subjects and authors, such as early phonography (Sterne, 2003), the mp3 format (Sterne, 2012), music consumption (Taylor,

2001), hi-fi and genders (Iazzetta, 2009), the Walkman and its successors (Hosokawa, 1984), (Acosta, 2000), (Chambers, 2004), (du Gay et al, 1997), (Bull, 2005) and locative media (Tuters & Varnelis, 2006), (Behrendt, 2015), (Verstraete, 2017).

Being a technology adapted from military communication to hi-fi stereos and finally to the streets, its history may be traced even before any sound recording, back to the start of what Jonathan Sterne calls tympanic function, evolving to a technological commodity and even to a fashion statement. This article looks at the headphone history, suggesting its functions varies through time, from his use as a military device to a luxury fashion accessory.

2. THE TYMPANIC FUNCTION

The origins of the headphones get back to what Jonathan Sterne calls *tympanic function,* which raises in the transition between the 18th and 19th centuries, with the study of the human's ear anatomy and functioning. According to the author, from these mechanisms derived a series of research techniques as well as scientific experiments which promoted the construction of a new gear of equipment, dealing with operational hearing and composed by auditory extensors.

> The history of the isolation and reproduction of the tympanic function leads us back into the construction of sound and hearing as objects of knowledge and experimentation in the late eighteenth century and the nineteenth. The tympanic function emerged at the intersection of modern acoustics, otology, and physiology and the pedagogy of the deaf (Sterne, 2003: 22).

Leon Scott is the inventor of the Phonautograph, the first device with sound transduction. Analyzing his works, Sterne finds that the ear's mechanism can be used with several purposes. Hence, Sterne accomplishes an archaeology of auditory devices, including in the hearing amplification history the stethoscope and communication devices, such as the telegraphic and the telephonic network, developed in the 19th century. According to Sterne, these devices contribute to the creation of the firsts sound reproduction products, commercialized by Edison in the last decade of the century.

Following Sterne's reasoning, the function of a technology sets up before its materialization in devices and products. The function of technology would

be *"a set of common operational and philosophical principles, and, most important, as embodiments and intensifications of tendencies that were already existent elsewhere in the culture"* (Sterne, 2003: 34).

The author suggests that the interest in the auditory channel as a research instrument triggered the proliferation of audio equipment creation. The headphones are no exception, being a material result of the *tympanic function* discovery.

It is worth mentioning that, by finding that connection between the stethoscope and the Edison's audio gears, Sterne inverts the causal role technology use to have towards culture. Furthermore, it could be argued that Sterne follows the inverse path of the sound media commentators and experimenters, by counterbalancing the hegemonic post-war explanation of audio culture origins. Remarkably, the School of Frankfurt cultural theorists, such as Walter Benjamin or Theodor Adorno, or even composers from the so-called electroacoustic music schools, such as Pierre Schaeffer or Karlheinz Stockhausen. For these thinkers and artists, the assumption is that sound reproduction media triggered a series of cultural and artistic practices. In contrast, according to Sterne. "...tympanic sound reproduction technologies are best understood as the result of a proliferation of a particular set of practices and practical understandings concerning sound and the ear, not as the cause" (Sterne, 2003: 35).

3. HEADPHONES AS TECHNOLOGICAL COMMODITY

Besides the relations between the tympanic function and the creation of the first sound reproduction machines, we also identify a social need for communication as key to the development of 19th century sound media technologies such as the headphones. That need, fed with the discoveries of the human auditory system, pushed inventors and audio engineers to the creation of audio technological products for a growing modernity.

The Electrophone System is one of the first inventions of audio tech to operate in the UK in the late 19th century. This sound transmission system used the National Telephone Company lines, broadcasting to its subscribers a live a stereo audio signal with music performances from concert halls, theaters and churches, as well as financial market news (Estreich, website).

Fig. 1: "Photograph of hospitalized british soldiers, joined by their toy elephant mascot, enjoying the Electrophone entertainment service". Photograph included in the article "British Wounded Hear London's Favorites Via Telephone", from page 230 of the August 1917 issue of The Electrical Experimenter magazine, available at https://commons.wikimedia.org/wiki/File:1917_London_Electrophone_hospital_listeners.jpg

The figure 2 shows an early headphone model used by Electrophone subscribers. Its shape reveals a proximity with the stethoscope, echoing the idea of an outer body auditory extension. The Electrophone System was also an early tentative in the commercialization of audio, but the venture vanished when broadcast radio spread.

Headphones were originally developed for military and civil communication purposes, where the telephonic patchbays where manually operated and the need for a hands-free device led to some of the first headphone designs. The bi-telephone, patented in 1891 by Ernest Mercadier, pioneered today's earbuds. It's a hands-free design, yet very similar to a medical stethoscope.

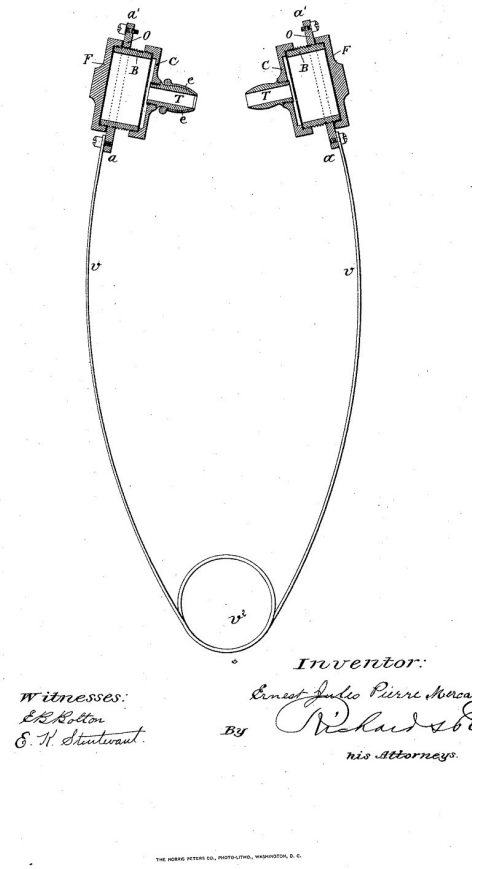

Fig. 2: Mercadier's patent for telephone earbuds, U.S. Patent No. 454,138 (Google patents)

Nathaniel Baldwin's 1915 patent shows a closer link with modern headphones. Its head band for telephone receivers achieved great commercial success due to the quality of its sound amplification. After several rejections, Baldwin sent his prototype to the American Navy. Following feedbacks and suggestions from his new client, he improved the head band, achieving a more comfortable design and receiving a 100 units order from the US Navy (Howeth, 1963: 149). Building the first headphones in his own house with a contract for 10 units deliver batches, he soon had to build a factory in Utah to deal with the increasing demand. By 1922, radio had become a popular

leisure activity, Baldwin's company grew even more, producing 150 headsets per day. Through partnerships he built two more factories in the cities of Chicago and Holladay and sales contracts were signed with companies from Japan and Canada (Singer, 1979: 51).

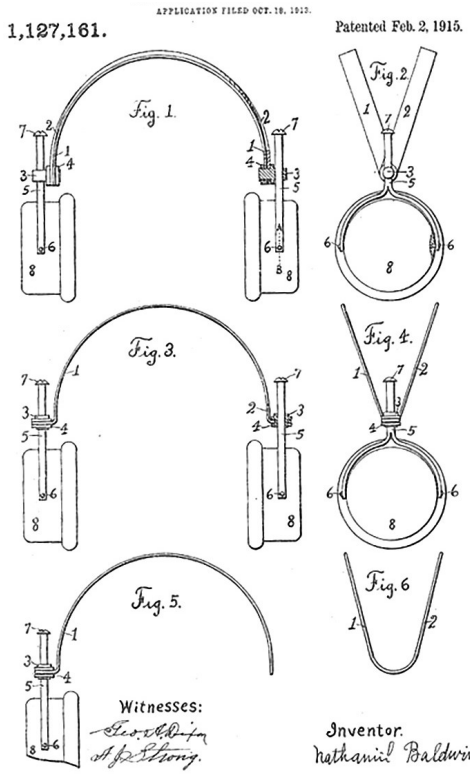

Fig. 3: Baldwin's patent for head-band for telephone-receivers, U.S. Patent No. 1,127,161 (Google patents)

Despite his success, Baldwin ended up poor. After some bad deals in new ventures and choosing the wrong partners, his radio equipment company went bankrupt. He went to jail in 1930 for irregular transactions, and after his time Baldwin was flat broke.

4. HEADPHONES AS AUDITORY DISPLAY

In the 1930s, with the expansion of the phonographic and radio industries, we observe the design of new devices in separated modules. Transducing electric energy into sound, the terminal module, previously embedded into the devices, start to have autonomy as a module, being sold as speaker boxes and headphones. In the Sound Design field, the idea of auditory display is considered as a category in which headphones are a particular case

> Auditory Display encompasses all aspects of a human-machine interaction system, including the setup, speakers or headphones, modes of interaction with the display system, and any technical solution for the gathering, processing, and computing necessary to obtain sound in response to the data (Hunt&Hermann, 2011).

Although relevant in the problematization of the design research process, the notion of auditory display helps to illuminate the new functions of the headphone. It becomes the auditory display of a myriad of consumer products used in everyday life. This process matches with the dizzying development of technological innovations incorporated into the headphones during this period.

In 1937 the German company Beyerdynamic launches the first dynamic headphone (https://global.beyerdynamic.com/company/once-and-today). Being a monaural headset, the DT-48 pioneer dynamic transduction technology in the headphone market. It is a milestone because this technology is still used today in the vast majority of commercial headphones, due to its reduced cost and lower distortion performance.

5. HEADPHONES AND COMMODITY SCIENTISM

The economic interests of capitalist agents coming from the 1940's phonograph and radio industries also participated in the social transformation of the headphones. With the prominence of unidirectional models of communication, the advertising and marketing sectors came to elaborate a new symbolic universe associated with the audio and materialized in the notion of High Fidelity, or Hi-Fi, which provided a new set of new connotations for headphones. The idea of Hi-Fi audio gathers ethical values and ideologies circulated in advertising campaigns of the time, which reached the consumers at their weakest spot. Therefore, the proliferation of domestic gadgets,

intended to the North-American middle class, made the headphones a kind of techno-listening commodity. According to Iazzetta,

> The term hi-fi (high fidelity) was introduced by the recording industry as one of the market strategies to convince its consumers that the music played by such devices as phonographs, gramophones and later turntables was "faithful", meaning by that an adequate representation of the music performed live (Iazzetta, 2009: 114).

Analyzing the advertising and marketing campaigns of audio devices in postwar American society, researcher Timothy Taylor highlights the notion of commodity scientism as "a belief, negative or positive, in the ineffable qualities of science and technology" (Taylor, 2001: 76). Being key devices within the Hi-Fi home audio system, the headphones went beyond symbols of social differentiation, they acquired connotations related to a form of futuristic leisure provided by the advances of science. Moreover, Taylor points gender issues in the materialization of this commodity scientism in the Hi-Fi audio, identifying the consolidation of a male figure as the main consumer of this technology.

> Commodity scientism in the domestic scene for men is probably best represented by the hi-fi craze of the late 1940s and 1950s. Many of the first hi-fi enthusiasts were men who had learned about audio technology in the army during World War II. They continued their interest by becoming hi-fi hobbyists back (Taylor, 2001: 79).

According to Taylor, within the values of the period, a pair of Hi-Fi headphones let the user escape from the mass media production intended to the female audience (Taylor, 2001: 80). The man had access to a qualified device for listening high culture musical products. The household appliances for cooking and cleaning are usually settled as a female version of Hi-Fi.

The male audience used these technologies to confront the female hegemony within the family environment, supported by the obscurity on the operation of those devices and the volume they could produce, thus confronting the order and tranquility imposed by the housewife (Iazzetta, 2009: 121)

What Taylor and Iazzetta suggest is that during the 1940s and 1950s the consumerist notion of Hi-Fi contributed to the definition of gender identities. Particularly, by transforming the user's home into a technological leisure environment, Hi-Fi audio equipment such as the headphones helped to exalt the user's masculinity.

During the 1950s, valves replaced transistors inside audio equipment. Transistorized components built by AT&T enabled the construction of lighter, smaller and more efficient audio amplifiers, which were quickly implemented in hearing loss devices. However, according to Acosta,

> ...through the United States regulatory anti-trust system, licenses were granted to the small Japanese company who wished to acquire the rights, and Mr Morita and Mr Ibuka from the newly named company, Sony, did in 1952 for U$ 25.000 (Acosta, 2000: 20).

Thanks to the transistor, during the 1950s, 1960s and 1970s corporations such as Sony launched to the market smaller radios and players with recording and media browsing capacities such as rewind and forward. The functional and visual diversification in the design of audio equipment also suggests a transformation in user habits, placing audio consuming in the lifestyle.

Headphones joined this audio technology stylizing process. The Koss brand released models such as the SP/3 and then the ESP/6, commercialized some years later. The former, created in 1958, was the first stereo headphone to be sold (https://www.koss.com/history).

The idea of Hi-Fi was frequently invoked to sell these devices. The latter was launched in 1968 and is also aligned with an audiophile listening practice. They were the first electrostatic headphones released on the market. The magnetic induction takes place in the diaphragm itself, composed by thin layers of conductive surfaces that vibrate when excited by the electric audio signal.

Regarding audiophilia, audio device manufacturers spent years optimizing the technologies they developed, offering their consumers products with more quality. With the exponentially increase of quality and prices, a niche market for the consumption of these technologies appears. A worth mentioning example is the the innovative noise cancellation model, manufactured by Bose and released in 1995.

Two years before the launch of the Koss ESP/6, in 1966 Koss launched the famous Beatlephones, which main innovation was not technical, but social, marketing the product to new audiences. The Beatlephones had a blue color shield with pictures of the band members printed, adding a new quality layer to the headphones, through artist sponsorship (https://headphoneshist125.weebly.com/the-beatlephones.html).

6. HEADPHONES AS URBAN STRATEGY

With the launch of the Walkman in 1981 and its vertiginous popularization, the consumption of audio devices gets more complex. Leaving behind the domestic audio Hi-Fi devices, portability was explored by Sony for two decades. The Walkman super aural headphones model was lighter and smaller since it was intended to be used outdoors. The Walkman outlined a cultural transformation, which did not remain indifferent to the humanities. Thus, a series of theories emerged, pointing out different aspects that are relevant to our thinking about the function of headphones. These theories accumulate in a field of studies addressing cultures of mobile listening. This article intends to contribute in this field, discussing some of the main ideas and authors.

6.1. Walkman studies

Shuhei Hosokawa's seminal text "The Walkman Effect" (Hosokawa, 1984) was the first to link audio equipment to urban life by discussing the Walkman as a citizen's instrument in a nomadic distribution of the modern city. Hosokawa discusses concepts such as portability, uniqueness, autonomy and construction/deconstruction of meaning as key factors in the desire for social isolation. The author outlines a whole musical theory on portability, the musica mobilis, taking into consideration many relations between music listening and urban structures.

From the technical perspective, Hosokawa states that the Walkman was a technological regression, in the sense that it has neither recording operation nor a speaker. The idea of reducing the functions was conceived by Sony president Akio Morita when he walked through New York streets. Furthermore, the Walkman advertising campaign pointed to an urban lifestyle where technological simplification became a positive aspect. By collecting arguments in both conceptual and technical grounds, Hosokawa suggests that the Walkman is a strategy, a tactic for the contemporary urban life.

British scholar Ian Chambers (2004) extended some of the thoughts addressed in the Hosokawa's original text, notably by discussing the construction of a diasporic identity of the life in transit. For Hosokawa, the construction of identity raised by the use of the Walkman is materialized in the notion of singularity, while Chambers draws attention to the place destabilization caused by the Walkman:

> Its uncanny quality lies in its deliberate confusion of earlier boundaries, in its provocative appearance "out of place". Now, the confusion of "place", of voices, histories and experiences speaking "out of place" forms part of the altogether more extensive sense of contemporary semantic and political crisis. A previous spatial hierarchy has had increasingly to confront an excess of languages emerging out of the histories and languages of feminism, sexual rights, ethnicity, race and the environment that overflow and undercut its authority. The Walkman is therefore a political act? It is certainly an act that unconsciously entwines with many other micro-activities in conferring a different sense on the polis. In producing a different sense of space and time, it participates in rewriting the conditions of representation: where "representation" clearly indicates both the semiotic dimensions of the everyday and potential participation in a political community (Chambers, 2004).

In sociology and cultural studies fields the Walkman provided an excuse to elaborate a detailed and didactic academic work getting onto social sciences research topics and methods. The text "Doing Cultural Studies, The Story of the Sony Walkman", brings together five essays and five authors (Paul Du Gay, Stuart Hall, Linda Janes, Hugh Mackay and Keith Negus) who analyze the Walkman's cultural phenomenon from perspectives such as Representation, Identity, Production, Consumptions and Regulation.

> We have chosen the Walkman because it is a typical cultural artefact and medium of modern culture, and through studying its 'story' or 'biography' one can learn a great deal about the ways in which culture works in late-modem societies such as our own (du Gay et al., 1997: 2).

Although the main topic of the text is cultural studies rather than the Walkman, the scrupulous social science research developed by the authors enables a close look at the various cultural nuances of the Walkman and the headphones. The study involves the analysis of advertising and journalistic material, interviews with executives and designers from the Sony corporation, as well as a rich bibliographic path which confronts many of the 20th century cultural studies theorists. In short, the text responds in a systematic way to the complex problem of Walkman's cultural meaning.

The chapter 5 is particularly relevant to our discussion while it discusses consumption and how the theories explaining it have historically evolved. Consumption is characterized in contemporary societies as a productive

practice involving appropriation and resistance. The chapter 6 deals with the mechanisms of the society to rule the use of the Walkman. According to the authors the walkman causes a disruption in the established classifications that define the public and private spheres. The authors discussed the enfolded debate about appropriate and inappropriate modes of public behavior shortly after the launch of the Walkman in Britain.

Michael Bull's study "Sounding out the city. Personal Stereos and the Management of Everyday Life" (2000) follows the same direction than the study performed by Du Gay, Hall et al, since he places it in the field of cultural studies. The originality of Bull's study resides on the research methodology, since the author appeals to ethnographic methods to reach his conclusions. In doing so, the author points out new arguments about the use of the Walkman from interviews and focus groups among other methods of practice-based social science research.

A more recent commentator of Hosokawa, Pieter Verstraete, reflects on the qualities of the Walkman to construct and deconstruct musical meanings.

> This audio walk or 'theatre' turns the sense of being 'in charge' as iPod user over one's environment around and plays on a voyeurism in the mobile listening act, enhanced by the secrecy of the headphones which make one feel safe to look shamelessly at others who become part of one's own secret theatre (Verstraete, 2017).

Taken from the Hosokawa analysis of the passerby's experience with the Walkman, the notion of secret theater is confronted by Verstraete with recent works of locative sound art, especially the piece Alter Bahnhof Video Walk by Janet Cardiff and Georges Bures Miller, presented in Kassel's Documenta 13.

About twenty after the Walkman, some technologies matured and converged to renew the musica mobilis in urban culture, adopting an intangible media. As Jonathan Sterne explains in his book *mp3: The Meaning of a Format*, the music exchange culture was reborn by new ways of storing, transporting, and copying the music.

6.2. Headphones in the computer age

With the proliferation of personal computers with multimedia players, the songs could be extracted from a physical media. With the development of an algorithm that reduces the size of digital audio files and the creation of

the mp3 format, the songs were converted into smaller files, that could be easily stored and, thanks to the popularization of the internet in the developed countries, distributed among those interested in accumulating mp3 files in their computers.

Soon emerged portable devices running the new audio format. They were extremely limited in the beginning, almost as functional prototypes: one of the first devices able to reproduce mp3 files was Diamond Multimedia's Rio, released in 1998 (Sterne, 2012: 203). It had 32 Megabytes of memory, enough for about half an hour of music in the mp3 standards of the time. Just three years later Apple started selling mp3 players. The first iPod, from 2001, had five Gigabytes of space - or "1000 songs in your pocket", as the marketing campaign bragged.

In line with the music industry attempts to contain piracy, Apple launches the iTunes Store digital sales platform in 2003, establishing a new market (Cummings, 2013: 89 and 220). This allowed the commercialization of the digital phonograms to a wider audience than internet geeks: Apple sells one million files in the first week, 25 million in eight months (Hill, 2013), and in 2008 it becomes the largest music seller in the United States (Apple, 2008).

In the computer market, Apple's product design has always been a distinguishing feature, being part of its marketing strategy. His "mp3 player" had to be unique and unusual.

Sony popularized the super aural headphones – small and unobtrusive for that time – selling them alongside the Walkmans. The devices, although portable, were hardly concealable, and the Walkman was visibly worn and fixed to the clothes with clips. IPods, launched more than twenty years later, took advantage of another generation of component miniaturization. Although the advertising images showed silhouettes holding the device in hand, even the slogan of the 1000 songs suggested the pocket as the most suitable place to keep the equipment.

Because of its size and discretion, the product uniqueness appeal had to spread to the headphones: since its first model the iPod was sold with a pair of innovative little white earphones. The 2003 iPod ad campaign illustrates just how Apple intended to use the headphones look to stand out from the competition.

Fig. 4: Apple's iPod ad campaign. Photo "20.Chelsea.NYC.PM.25March2006" by Elvert Barnes, 2006, under CC license [CC BY-SA 2.0], original available at https://www.flickr.com/photos/perspective/14765417491/in/photostream/

With an advertising campaign approximately one hundred times more expensive than the one from its competitors (Isaacson, 2011: 392), Apple not only positioned itself comfortably in the portable player market, but also collaborated to renew and multiply the use of headphones on the street. Apple branded products were socially differentiated by the use of white earbuds, which were replicated by the competitors shortly thereafter, proving the strategy's efficiency.

The headphones, which slowly came out from military applications to play a decisive role in the the privatization of music, now was also serving as an object of ostentation in the urban landscape.

6.3. Headphone as luxury item

Shortly after the first few years of selling iPods and other "mp3 players", North-American rapper Dr. Dre, music producer Jimmy Iovine and engineer Noel Lee teamed up to create headphones that mixed sound quality

with fashion and branding. By appealing to hip-hop music lovers, the headphones audio response was designed to enhance rhythm patterns and bass frequencies. The brand Beats by Dr Dre launched its first pair of cans in 2008, associating its products with music and sport celebrities in aggressive product placement campaigns, giving to the headphones the status of fashion accessory and luxury item. They are circumaural (covering the entire ear), larger than Apple earbuds, and therefore very flashy.

Fig. 5: Basketball player LeBron James warming up before game with his Dr Dre headphones. Photo "Basketball: USA reign in Spain" by Christopher Johnson, 2012, under CC license [CC BY-SA 2.0], original available at https://commons.wikimedia.org/wiki/File:LeBron_James_warming_up_before_USA_vs_Spain.jpg

According to the creators, the goal was not competing with well-known brands of headphones like Sennheiser or Bose, but to dispute the money of the young who buys a pair of sneakers. The success of the venture reflected in the industry numbers, which saw a 32% increase in revenue. The headphones now have another social function, as Greenburg reflects:

> Just as Nikes were as much a fashion statement as an athletic necessity, Beats—with its flagship Studio line available in a rainbow of colors—soon became equal parts accessory and audio device. "We changed the way headphones are a part of lifestyle," says Lee. "It established headphones, where it's cool to wear headphones around the neck even though they may not be plugged in." Adds Brian Dunn, Best Buy chief executive: "It's not about the sound, solely; it's about the fashion" (Greenburg, 2013).

It is clear in the statement above the value of the headphones beyond musical fruition or urban noise isolation. In the 1960s they were already associated with famous bands like The Beatles, but since the launch of the iPod they have a new layer of meaning, with a clear fashion and status appeal, often losing its sound reproduction function.

6.4. Locative Audio

Digital audio devices provide operations that extend the playback of music files. Both in the gaming and in the mobile applications industries, a territory of creative experimentation in the field of interactive audio has extensively grown in the last decades. In the construction of these new narratives, the integration of a microphone to the cans in a single headset device has produced a new powerful human-computer interface. They gave rise to new ways of exploring virtual and mixed realities, where neither the sight nor the hands are occupied. Among these new narratives we will discuss headphones in the context of locative audio.

Locative media take advantage of context-aware computing (Townsend, 2006) by working under the assumption that ubiquitous internet access is changing our relationship with space by overlaying a second virtual world over the physical one (Tuters & Varnelis, 2006). Under this conditions the headphones become an indispensable tool for the commuter to access the smart cities.

The specificity of locative sound media or locative audio has been discussed by Frauke Behrendt (2015) from four different categories such as placed

sound, sonified mobility, sound platforms and musical instruments. The author brings different uses of the GPS on audio applications and highlights what she calls placed sounds:

The popularity of this category is demonstrated by the fact that, over the last decade, several themes or sub-genres of the "placed sound" category have emerged, including more narrative ones such as historical, touristic, educational, fictional, games, and less narrative ones such as music and experimental sound.

In the locative audio experience, the headphones play a different role than as a traditional music player. The headset enabled the user send and receives information without occupying neither the sight nor the hands. While the relevance of GPS and online information about the city is growing and the tools to access this information is getting more and more sophisticated, it is expected to be an even bigger field of exploration for locative audio headphones designers.

7. DISCUSSION

After our inspection the headphones turn up as a place of convergence bringing together a set of technological and cultural values, where issues about music, market, alterity, citizenship, gender and fashion coexist. Despite these crossings, it also raises the question on the supposed empowerment of listening through technology, by unveiling the cultural and social contingencies interacting in the definition of its function. As it is remarked by Sterne, "it also shows the degree to which a social practice almost two centuries old—the isolation in a world of sounds first developed by medical doctors in the early nineteenth century—can be articulated in new ways". (Sterne, 2003: 337)

Beyond the scientific use addressed by Sterne or even the commercial success of Baldwin's headphones in military training, the headphones have joined the evolution of recent human civilization becoming an indistinctive symbol of modernity. In the first decades of the 20th century they were a rudimental communication device used in the first radio and telephonic systems. With the expansion of phonographic and radio industries they were promptly exploited as a music listening device. It is when they assume their modern function as an auditory display. While consuming music was a postwar middle class value, headphones were transformed in a kind of techno-listening commodity grounded in an ineffable trust in

scientific innovation and materialized in the concept of Hi-Fi. Furthermore, according to Taylor and Iazzetta during the 1950 and 1960 the headphones were a gender definer since they were associated with a male universe. Transistor's miniaturization brought new modes of use for the headphones, notably with the launch of the Walkman in the 1980's. They turned into an urban strategy for the passerby in a nomadic distribution of the modern city. Therefore, natural headphone features such as mobility and portability gained attention as consuming values. The headphones' function turned into a lifestyle matter. From the 1980's, the headphones are used deliberately as context isolators, not without provoking a disruption in the traditional categories about public and private behaviors. Apple iPod + iTunes package exploited MP3 audio Internet technologies and changed the consumer market scenario by offering earphones as an extra gift. While the privatization of music listening were tokenized by apple earphones, Dr. Dre was launching its first fashion headphones that did not take long to become a luxury item. Meanwhile, headsets equipped with microphones are also being adopted in interactive narratives such as gaming and smartphone applications. Particularly, in the emerging field of locative audio, headphones play a decisive role as a hands-free and sight-free computer interface.

Since each of these headphones' uses have a temporary validity, they overlap each other in the contemporaneity. As a result, we can conclude that headphones have many possible functions related to audio consumer habits. From this perspective the history of headphones is also the history of consumerism, marketing and advertising of audio. While Walkman users surpassed the domestic audio Hi-Fi craze by giving a urban function to the headphones, Dr. Dre headphone users have completely absorbed this urban function and are adding new stylish connotations to them. The evolution of headphones' use shows how consumerism became an active operation: an act where identity is defined and constructed.Lastly, we wonder why Walkman has received so much theoretical attention, while is hard to find studies devoted to the headphones. By comparing the Walkman and the headphones as subject matter, we would say that all that is true for the Walkman, is also true for the headphones. Moreover, some of the analysis devoted to the Walkman, could be rather attributed to the headphones, such as the isolation quality, the disruption of the public and private or even the association with a lifestyle. From this point of view, the Walkman could be seen as an academic fetish masking the relevance of headphones as a symbol of modern culture.

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