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Sonorities and affordances politics building game identities: silent dynamics of contemporary capitalism in the entertainment industry

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Abstract

The article approaches the use of sonorities in electronic games exploring how they affect the game's identity and dynamics. We understand that such affectations are co-determined by aural expressions that act as modulating technologies of the gamer's emotional and cognitive states, favoring mental states that singularize the immersive experience. Finally, the goal is to think about the ways which the games industry benefits from these cognitive, emotional and mental modulations. The bet is on the use of the sonorities with an affordances politics, which aims to maximize the time spent by the gamer with the game, contributing to the strength of the practices of platform capitalism, attention and surveillance in the game universe, reaffirming a trend in the contemporary entertainment industry.

Keywords

Introduction

In 1968, Marcel Duchamp made his last public appearance, along with fellow art legend John Cage. The event was a chess match. However, it was not just an ordinary game. The chessboard had been prepared so that each one of its 64 squares triggered a sound, which either vibrated or muted as the game unfolded. The sound ambience shifted according to the chess pieces moves – a ludic musical composition that was collectively, randomly conceived and performed. On the one hand, if Duchamp or Cage deliberately decided to tamper with the musical composition, they would risk making a wrong move and hence losing the game. On the other hand, is it possible to state that they have not interfered with the resulting sonority during the game, considering the fruition – whether positive or negative –experienced by each one?

Although it partially eludes regular game practices, exactly by including sonority, the sonorous chess game played by both artists allows the exploration of this complex, fascinating universe of sonic expressions[1] and games, especially regarding contemporary electronic games.

Therefore, the Cage-Duchampian performance is paragon for the study of the articulation between games, particularly since it allows perceiving some research paths, such as: how much can the sonic expressions of a given game affect the game's dynamics themselves? Or how do these expressions influence the experience's quality and even the game's identity? Or, also, in a broader perspective, is it plausible that the aural experiences experienced by the player within a game work as modulation technologies for emotional states, such as technologies of the Self (DeNora, 2004), hence further affecting the relationship between player and play?

Inspired by these questions, our aim is to investigate the plausibility of electronic games sounds operating in two basic fronts: firstly, as fundamental elements for games' identity elaboration; secondly, as modulation technologies for the player's cognitive and emotional dimensions, being capable of inducing specific mental states in players, such as flow, which singularizes immersive experience in games. Finally, the idea is to reflect on the ways the game industry is benefited by these sonic effects toward the construction and strengthening of games' identities, as well as their consumer audience's cognitive, emotional, and mental affectations.

Hence, in accordance with an expanding movement within Game Studies to observe electronic games' practices, dynamics, and culture in political terms (Falcão & Mussa, 2020), this paper's premise is grounded in what we call neuromedia researches (Pereira, 2015, 2020) in dialogue with sensoriality, sonority, and game studies (Meneguette & Bausbaun, 2016; Collins, 2013) in order to reflect on the exploitation of games by contemporary capitalist dynamics. Also drawing from communication materialities theories, this research evidences a set of relevant issues related to the material aspects of technologies, such as design, functionalities, and, moreover, the affordances used. It is in this sense that we reaffirm the idea of affordances politics (Pereira, 2020) as a strategic plan for the unequivocal presentation of any given technology's perceptive elements and, most often, not attentive to their users, Though this may sound contradictory. Such elements cooperate in the production of actions and behaviors that, by their turn, carry on the most effective experiences regarding the employment of technologies and the commercial goals of the companies which produce and sell these very technologies.

In the case of the current paper, our purpose is to investigate how affordances politics materializes itself and, in order to show how the concept is applied, we present several examples of games.

Therefore, we expect that – regardless it may be called Platform Capitalism (Nieborg & Poell, 2018) or Surveillance Capitalism (Zuboff, 2021), among other possible names - conceiving strategies

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[1] In the current study, sonic expressions include games' theme songs, soundtracks, and commercial vig-nettes, as well as any expression that fits into what is understood as sound design within a game.

and politics for struggling with and resisting the abusive dynamics of contemporary capitalism must involve acknowledging and clarifying the silent actions and strategies which take hold of the bodies of contemporary technologies users, which is the core aim of neuromedia researches.

In the current study, we expect to demonstrate the relevance of sonorities as mechanisms to apprehend and maintain attention (in games) and, consequently operating as relevant agents to the implementation of a culture through which "productive" time emerges during leisure time. We believe that these are silent practices that, as detected in the examples shown in this work, in light of Marshall McLuhan's thought (1964), modulate bodies and minds through dynamics of amalgamation with technologies.

Affordances politics

The idea of "affordance" was originally proposed by psychologist J. J. Gibson and later introduced by D. Norman to the design field. By acknowledging perception as a process that actively involves the senses, rather than a perspective that acknowledges it as resulting from a merely passive process, Gibson went a step further toward criticizing a merely representationalist model for the relationships between perceiver and perceived, even regarding the classic antinomies subject/object, mind/body or subjective/ objective (Thurler, 2019):

> "An affordance, thus, points toward two paths – the environment and the observer, as well as the information that specifies the affordance itself. However, this does not imply separate spheres of consciousness and matter, a psychophysical dualism of any sort. It simply means that due to specifying the environment, information is also accompanied by information specifying the observer itself, that is, their body, legs, hands, and mouth. (...) This is completely inconsistent with any form of dualism, be it mind-matter dualism or mind-body dualism. The perception of the world and the perception of the complementary relationships between the observer and the world are inseparable" (Gibson, 1986 apud Thurler, 2019, p. 39).

Hence, an affordance must be understood as a material expression inscribed in a given object, being not only liable to perception, but always perceived by a perceptor subject. For Gibson, an affordance can exist even when it is not perceived, unlike the perspective proposed by Norman (1999). According to Norman, we understand affordances as perceptual pregnancies (Prägnanz) which emerge within the relationships established by humans toward things, particularly in the uses they make of technologies. Such perceptive pregnancies are triggered by sensorial, visual, tactile or auditory signs that may be presented by an aspect of the thing or technology being used. In this sense, through dealing with a given technology, every visual, sonorous, and tactile information that comes forward to the perceptual forefront can be understood as affordances.

Similarly, when we consider the idea of affordance as applied to sonorities, we must consider it as a sonorous expression that stands out within a sonorous ambience or "soundscape"[2](Schaffer 2001), also eliciting a specific response from the hearer, either relating to perception or a given behavior (Roddy & Bridge, 2018).

Therefore, in order to analyze sonorous affordances in electronic games, one must consider not only that sounds work as triggers for the perception of objects, characters, specific situations within the dynamics, but also expressions that affirm both the identity and the ambiences of the game (Meneguette & Bausbaun, 2016).

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[2] The expression was coined by composer and musicologist Murray Schafer in reference to the study of the sonorous universe surrounding us. "Soundscape is any acoustic field of study. We may speak of a musical composition as a soundscape, or a radio program as a soundscape or an acoustic environment as a soundscape. We can isolate an acoustic environment as a field of study just as we can study the characteristics of a given landscape" (Schaffer, 2001, p. 23)

Obviously, both in Gibson and Norman, the concept of affordance can only be built upon an ideal perceiver subject lacking any perceptual or cognitive characteristics that, hence, may deviate from a normative pattern for perception, from disabled subjects as evidenced by Disabilities Studies (Siebers, 2008).

This poses questions and critique concerning the concept of affordance, especially if it is considered in light of sonorities. However, we follow the path offered by researchers based on the concept, despite their problems, thus adopting Thurler's perspective on the concept.

> Although acknowledging the complexities involving the concept of affordance, especially regarding digital objects, we have decided to employ it because no other concept offers an ecological /relational/holistic approach to materialities and due to its employment by researchers whose interests are similar to ours, hence enabling literature review and analysis of the state of art on the theme. The concept is employed by many researchers who study the relationship between technologies and social practices, since it helps understanding different uses of one single technology within work and communication dynamics (Leonardi & Treem, 2012, p. 146).

Once having considered the topics above listed, affordances politics must be understood, then, as an array of strategies and plans for assembling and distributing perceptible elements, audiovisual-motor signs (Pereira, 2015), which favor not only immediate perceptions, but also response actions to the stimuli offered by these signs during the interaction with a given technology.

As a whole, affordances politics must be understood as the array of actions, elaborations, perceptions, and responses to an array of signs which result in specific behaviors previously expected by the implemented politics. In the case of the current study, we have focused on this idea within the field of sonorities both implicated in the direct relationships they establish with the processes of identity construction in games as marks, and the sensorial, affective affectations that they may exert over players, providing altered states of consciousness like the flow. In both cases, affordance politics aim at complying with game companies' goals and interests, as we have argued. Next, we develop both perspectives.

Game identity and sonic palette

Schell argues that the creation of games always must imply four structural elements, which he calls "elemental tetrad". Such elements are aesthetics, story, mechanics, and technology (Schell, 2008). The aesthetic dimension must be thought of as the form, the appearance of the game and, also, the product elicited by material frames (images, animations, settings, characters, environments, furnishings, artifacts, weaponry, etc.). Story concerns the narrative elements of the plot: theme, mission, challenge, characters and their powers, in sum, the plot and its unfolding possibilities during the game. Mechanics evokes the idea of gameplay[3], that is, playability, that is what the player can do with the commands and the program embedded in the game. As for technology, it must be understood as the platform, the console, the technological mediation that enables the existence and the very experience of the game itself (Schell, 2008). Elaborating the identity of a game must consider this basic structure, where sonority plays a role in the game's aesthetic, but also functional part (Meneguette & Bausbaun, 2016).

Sonorous identity, as any brand's identity, must emphasize the singular aspects of the product so the audience can pay some attention to the game and recognize it. Still, it also must work within an array of actions in the game, which will work as triggers for sounds and vice-versa. That is, actions activate sounds and sounds trigger behaviors, responses, and performances from the player, all for the sake of the game's

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[3] It is a term coined by the game industry that includes all the player's experiences during their interaction with a given game system, especially formal games, and that describes the ease with which the game can be played, the number of times it can be completed or its duration. Available at: https://pt.wikipedia.org/wiki/Jogabilidade. Access: 16th July, 2021.

success and acceptance in the market. In this sense, "building a sonorous identity for a game, then, means trying to establish a system for differentiation and similarity relationships between the game's sonorous events and the variety of existing games" (Meneguette & Bausbaun, 2016, p. 654).

In face of the different demands that the sonorities seek to attend within the identity composition of a game, the understanding of the idea of sonic palette is paramount. Basically, this palette is the sonic ensemble available for elaborating all the sonorous expressions of a given game. A series of sounds that must comply with a conceptual unity, being available to serve games in each one of their dimensions. Thus, the palette both enables the elaboration of the sounds which influence the gameplay actions and the immersion in the game's universe, as well as the sounds from the marketing and promotional area, characterizing games and their respective companies' sonic signatures and vignettes, which may be featured in teasers, trailers, ads, and so on.

Therefore, a sonic palette may be understood just like a color palette, whose sonic, aesthetic elements can attend to the different sonorous demands of a single game in accordance to a common conceptual unity. The soundscape of a game is a good example of the idea of sonic palette. Generally, such an idea can be understood as the sonorous ambience generated by the game's different settings, characters, and events. Although they are committed to different guiding principles regarding real sounds – being closer or not to real sounds outside games, depending on their aesthetics[4] – the soundscape must coherently reflect the story of the game, one of the elemental tetrad components proposed by Schell (2008).

Thus, sonorous palettes enhance the aesthetics and style of any given game. Different from alluring visual aspects, soundscapes' sonic atmosphere is subtle, even when employing impacting sounds in warfare games, for instance, as the Call of Duty (2003-2020) series. These landscapes are tenuously located between the real and the fictional, always attempting to transport the player's mind into the story's universe, enwrapping them in some sort of sonic simulacrum. Movies help to either compare or expand this idea. In movie scenes, the audio mixing can produce a setting for characters or situations described by the elements on the screen. If there are two people talking on the street, the ambient sound can't be louder than their dialogue. However, at the same time, one can't eliminate the urban sounds because viewers would find it weird. It is not the way we hear. Differently from vision, that is focal, hearing is spherical; it immerses us in the object; it captures the sounds surrounding us; and it involves us with the outside world (Sterne, 2015). Simultaneously, urban sounds can be used in high intensity, in some sort of narrative provocation of big cities' sonic oppression, thus indicating that the characters must go and find a quieter place, for instance. A game with a well-constructed identity also successfully employs this almost imperceptible sonorous layer as an element to captivate the attention and control the actions of the player.

It is within these not consciously perceived layers, which stimulate specific regimes of attention and numerous actions and behaviors, that affordances politics reveal its mode of operation and relevance. They are strategies for the insertion of sonic signs and stimuli that guide and induce the player into an array of actions and responses that are compatible with the companies' goals: strengthening the identity of the brand/game, assuring a singular quality for the game experience, and, finally, assuring that the player/consumer establishes an emotional bond with the game as to take it as an expression of their own identity, besides devoting long periods of time to the game. To spend more time playing a game can allow game developers to collect increasingly more data from players – their playing patterns, consumer profiles, aesthetic interests, etc. – and, also, they can use this time to expose the players to a broad and diverse

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[4] According to Meneguette and Bausbaum (2016, p. 658), the appearance of games took on different audiovisual styles related to different aesthetic strands: photorealism, caricaturism, abstractionism, tele-visionism, and illusionism.

array of ads, as game based marketing[5]. The idea of flow is another way to approach the experience of playing time.

Flow and the dynamics of platform capitalism

Flow must be understood as a state of altered consciousness during which one experiences an acute focus on whatever one is doing, suspending the perception of the passage of time, activating brain reward systems through actions balancing between stimulating challenges and cognitive, emotional abilities that enable the player to reach the actions' goals. Neuromedia studies have already pointed out that games can modulate brain structures into these states through continuous playing practice (Palaus et al., 2017).

Basically, the idea of considering the phenomenon of flow as a part of sonorous affordances politics comes down to proposing singular states within which players increasingly spend more time playing, favoring a series of contemporary capitalism goals in its numerous nuances. Here, we intend to emphasize that affordances politics are a smart design of sonorous dynamics that operate at a non-conscious level, and whose major objectives are captivating the attention of players for long periods of time. That is, such politics aims to design games in service of capitalism. By their turn, games can be understood through the idea of platformization as suggested by Nieborg and Poell:

> "[…] the infrastructural transformation in the game industry has not been as fundamental, as games have always been platform dependent. Platformization has not led to a radical process of unbundling, which is near impossible for games. That said, just as in the news sector, digital infrastructures enable game producers to transform largely linear production processes into ones in which content is constantly adapted and optimized. Consequently, games have become contingent commodities par excellence. The industry-wide adoption of advertising-dependent monetization schemes necessitates complete integration with platform infrastructures, which is most apparent for free-to-play mobile games. Here the GAFAM platforms fulfill key functions in terms of attracting, retaining, and monetizing players. Consequently, mobile game developers tend to subject themselves readily to the algorithmic and editorial-sorting practices of the app stores operated by Google and Apple. [Google, Apple, Facebook, Amazon and Microsoft] (Nieborg & Poell, 2018, p. 4288).

We relate the state of flow to the effective period of time spent by the player, in a dynamic that considers games as platform economy and playing as a component of the dynamics of a capital operated through the exchange of information. Based on descriptions, we will demonstrate how these sonorities play an important part in these developments by creating sonorous environments and palettes that modulate players' hearing in order to implement their performance, or, also, to determine games' identities with sonic signatures, hence generating an immersive environment. Therefore, as evidenced by Nieborg and Poell, game companies do not profit only on game sales, but also on the information capital they can generate with their customers. This capital is dynamic in terms of its usage. Besides more actively involving their audience in the display of advertising and sale of commercial items in games, the information extracted from this audience profiles also contributes to the development of other games and products.

This helps answer why so many contemporary games have online and multiplayer modes, including famous titles which, along the past decade, used to focus on the single player mode in adventures where

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[5] Games based marketing can be understood as marketing communication strategies that explore the game universe in order to introduce themselves to their audience. This may assume a wide variety of formats, ranging from traditional merchandising to pop-up menus embedded in different game platforms. The strategy is seeking different ways of attention adherence offered by the long periods of time players devote to games. An example was Nokia's action in the game Splinter Cell: Chaos Theory, which can be seen here: https://rockcontent.com/br/blog/game-marketing/. Retrieved on July 10, 2021.

the player takes on one or more characters' roles and the story is built through missions and cinematics that introduce the game's universe. An example is *Grand Thief Auto V*, or simply *GTA V* (2013), ranked among the ten top selling games ever. Originally focused on solo mode, with its easily reached over 50 hours long gameplay, was updated a few years after being released to include an online multiplayer mode, which assured its longevity in the market.

Originally released for both Playstation 3 and Xbox 360, it was only released for PCs in 2015, but, thanks to its online mode, it has been remastered[6] for each new generation of consoles. However, *GTA V* presents differences between its offline and online's sonic palettes. While the online mode displays more realistic dynamics, it complies with a fantastic atmosphere. Hence, it is possible to hang around an utopian Los Angeles (Los Santos in the game) and hear the sounds of flying cars and motorbikes, as well as the laser guns "pew pew". These are signals of how the company explores the solidity of the GTA V brand, instead of developing a new game, thus demonstrating that: "Game developers leverage the contingent nature of games as software by continuously altering, extending, and upgrading game content and functionalities, while simultaneously optimizing its monetization model." (Nieborg e Poell, 2018 p.4284). One calls players' affectivity and memories, reshaping the game with new attractions, enabling a whole new exploration of the very same universe. According to the audience, the sensation is that of playing the same game, only that it is not exactly the same. That is how they justify their reason to devote more time to the game.

The *GTA V* adaptation is interesting to help us perceive how companies have been taking advantage of the transformation in information capital, readjusting their brands so as to profit and prepare sequels for games released in different moments. It is an economic perspective marked by technological innovation, the emergence of new business models and the swift development of tools such as artificial intelligences, which automatize activities and speed up the data collection processing (DeMarchi, 2020). Because these games have online servers worldwide that support a massive number of logged-in players at the same time, they are true information mines, interaction spaces, and dynamic behaviors. In this context, games also actualize surveillance capitalism, which, as well defined by Shoshana Zuboff, it is about: "A new economic order that claims the human experience as free raw material for commercial practices disguised as (data) mining, predictions, and sales; a parasitic logic through which the production of goods and services is subordinated to a new global architecture for modifying behavior" (Zuboff, 2021, p. 13). The maxim "time is money" involves two distinct magnitudes, but in the context of the current discussion, it can be readjusted: "(your) time is (our) money". Time is the main consumer's attribute that companies may conquer, and the more abstract their perception, the better. Previously, this maxim fitted the clear division between labor and leisure, that is, the more rigorous was the control over spare time, the more likely to increase the amount of accumulated capital. This perspective connected time and the mass production of tangible goods in the industrial context. When we reworked the maxim, we evidenced the complexification of the production of goods and services' context. The pronoun "your" gains relevance as to the individuality aspect, marking time as being individual and not collective. It also emphasizes a unity as producer and consumer at the same time.

> The emergence of streaming technologies as a contemporary cultural phenomenon and the platformization process, therefore, reconfigured the historically tenuous line between play and labor. What seems to emerge is the consolidation of a business model – a platformization of play – through which key platforms (like Blizzard and Twitch) encourage their users/consumers to produce a huge variety of capital – affective, economic, social, cultural, among others (Falcão et al., 2020, p. 74).

In order to ground the hypothesis described above, let's consider the context of a few games. Lately, since games of the Battle Royale genre became a popular phenomenon, more traditional companies

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[6] It is the updated version of a game originally created for an older platform to work on a newer one.

in the industry have been struggling yearly to renew the format, releasing new seasons and games. Data mining plays an important part in businesses of this sort. Since they are multiplayer online games with globally widespread servers, data collection is paramount to diagnose and plan commercial strategies, always intent on captivating the attention of players of rival companies' games. In every case, the longer one devotes oneself to playing, as in social media, the more opportunities for collecting data from users, as well as subject them to more marketing actions.

Fortnite (2017), for instance, is a game rated 12+ whose sonic palette is consistent with the cartoonish theme presented by the graphics. The game is always setting partnerships with other companies to license avatars/skins from Marvel Comics, DC Comics, and other franchises' characters. Over this entertaining background, sounds are not mandatorily realistic as in other games of the genre. The exploration of tones is more permissive, allowing the incorporation of other products' sound palettes due to the constant promotional partnerships set by the game.

One of the game's main characteristics are the dances/gestures that can be purchased in the game's store. They can be used to tease or to celebrate an adversary elimination. They also became so popular that they were incorporated in several moments outside the game's universe, ranging from soccer players mimicking the choreographies after scoring goals to TikTokers and YouTubers who produce content inspired in the game's mechanics for their channels. It is also common to find YouTube videos that challenge the viewer to guess the dance/gesture according to the song played. That is, each one of these choreographies has a specific sonic signature, once more reinforcing the player's affective bond with the game through sounds.

While *Fortnite* has an alluring sonic palette, creating a casual sonorous ambience, *Call of Duty: Warzone* (2020) is a counterpoint within the same game genre. Rated for a 18+ audience, its sonorous ambience is diametrically opposed to Fortnite's. The graphics are more realistic, as the presence of weapons that simulate existing ones and its intense violence theme require a sonic immersion that is harder and more coherent with the involved visuality themes. The expressions and shots are powerful, worthy of war history records or action movies. The player manages to balance and feel the sonic impact on the thresholds between traumatic and pleasant experiences.

Sonic memories

The participation of sonorities in games' identities elaboration can also resort to sonic memories cultivated by players, either from other ludic experiences or not. It is about directly or indirectly evoking sounds that have marked a given event or incident, so anyone who hears them is immediately referred to familiar, affectively elaborated sounds. These sonorities bear a double entendre, mixing the brand to the player's memories. Simultaneously, they constitute a palette that both molds the game's identity and encourages actions from the player. Therefore, sonic memories are manipulated to characterize the game and also cooperate in inducing the state of flow. Considering the dynamics of platformization and data mining, the extra time spent by the player expands the brands exposition among numerous players profiles, with which is possible to promote a series of game-based marketing actions.

An interesting example is the constant dispute between soccer games franchises *FIFA* (1993-2022) and *Pro Evolution Soccer* (1994-2022). During a soccer game, the audio production involves whatever is expected to be heard – ball kicks, the referee's whistle, the crowd, and the narration. Recurrently, they appeal to the emotional, and, year after year, these franchises dispute the rights to rebuild the championships and use their sonic signatures. A very popular one is *Champions League*, glamorously represented by the classic television anthem. The licensed use of the television classic's soundtrack is a differential that captivates the player's attention through affective memory.

Sonic memories can be evoked by other experiences such as those that represent technologically

mediated events like several broadcasted sports events, for instance. Car races simulation games are a good example. The *F1* (2000-2021) and *Gran Turismo* (1997-2017) franchises' titles often reproduce, in the most authentic manner, the sounds of cars' motors, hence directly affecting the gameplay, as in gear shifting, for instance. As in soccer games, the franchises dispute the rights to authentically reproduce these sounds as exploration rights of a brand. Besides, during sports broadcasting, we hear the communication between the crew and the pilot. However, in the game, the player is the pilot. All those possibilities only experienced through television broadcasts become the player's reality. And they are extremely diverse, ranging from strategy shifts or a pit stop call to the information about the time difference between the player and his/her adversaries. Such aspects are not only the sonic ambience, but the very playability itself.

Leitmotiv and ludic-functional characterization

Leitmotif[7], an ordinary resource in audiovisual production such as movies, serials, soap operas, and so on, is another means to activate a sonic memory. Games resort to the same artifice, but differently from other audiovisual products, their sounds may require active responses from the player. The idea of leitmotif in games implies that eerie music indicates danger or a pivotal moment of the gameplay evidence the functional dimension of the sonic palette: "The creation of specific sonic signatures for games' class entities allows the game designer to employ typical sounds in a functional fashion, offering information for the player's strategic action: this is the method which is proposed to be called ludic-functional characterization" (Meneguette & Bausbaun, 2016, p. 662).

The ludic-functional aspects are interesting for arguing, once more, the affordance politics: aural mechanics within games that generate sensory motor responses, that is, playing relies on the active perception of these stimuli in order to achieve fruition and success. Regardless of how players might feel free in their actions, it is in these sound design layers that companies affirm their invisible control and power to dictate playability dynamics.

Returning to *Fortnite* and *Call of Duty: Warzone*, when we consider the sound mechanics, both games present similarities. These mechanics are related to the active aspects of the effects provoked by sonorities and what becomes relevant are the sensorial triggers. In themselves, the tones used remain in the background, that is, whether the guns, explosions, or vehicles' sounds are more realistic, high or low. What matters is whether they are able to generate stimuli in the player so that he/she can act in coherent, specific manners in the game; or, also, to recruit sensorial memories that belong to a sonic language common to games.

As it is possible to understand, these mechanics are connected to the question of modulating hearing and the adaptation of the player to game's sound mechanics. This is a sensorial/affective relationship. It is about processes to which bodies are subjected, in which sensoriality is a resonating bodily response to stimuli and the environment circumstances. Thus, in the context of games, it is about rescuing sensory-motor memories and even feelings, as we have seen with sonic memories, that, whenever perceived, elicit responses from the player in face of sonorities. In sum, sensoriality not only works as some sort of non-conscious, bodily memory that knows what certain stimuli means to the body, it also knows how to act in face of these very stimuli, according to the context (Pereira, 2006, p. 98). By their turn, affectivities relate to the ability to update bodily materialities in face of new messages, ambiences, and stimuli.

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[7] A leitmotif is a musical theme or figure that is associated with a given person, object, or idea in the drama. The association is created through the introduction of the leitmotif (generally by the orchestra) at the first appearance or reference to the objective or theme in question, and by means of its repetition on each subsequent appearance or reference (Grout & Palisca, 2007, p. 647).

Therefore, even if a given body does not have an adequate sensoriality to present satisfactory responses and actions to a given message in a given context, this body may start a transformation of its own sensoriality by the time this very body is exposed to new stimuli/contexts.   Through the repetition of this operation – exposing the body to new stimuli/contexts – this operation may generate a whole set of neural transformations that, by their turn, may result in new, more adequate perception and response patterns, to the same messages that triggered this whole process, regarding which, the body used to response in a less precise manner (Pereira, 2006, p. 99).

Hence, in the context of this paper, the relationship affectivity/sensoriality refers to learning given sounds that influence decision making. These situations are as follows: verifying the distance from the enemy by hearing a shot or the noise of a vehicle's motor; betray one's location or perceive the presence of another player through step sounds; or even hear a grenade that feels close to you in order to have the chance to dodge. Some games share these causes and consequences. In the same way, players expect to find these questions and answers in games. It is a two-way street – companies identify likely gaps to seize the opportunity to achieve their goals, as we shall see next. Still, at the same time, this common language is a relevant cohesion factor for players who are also experienced in other games. Usually, they are one step ahead within the competitive field, since their sensorial repertoire includes better adapted audibility.

While there is a consensual language in game design, now and then novelties appear and are slowly introduced until they become standard. Triggers that create new gameplay mechanics are introduced, that is, they satisfy the player who is experienced with that standard, but also offer something new, which is convenient for the company.

One example is the airdrop[8] mechanics from *Battle Royale*. It became popular in *PUBG* (2016), the hit that has been inspiring the series of titles of the genre. In general, the air drop sound is perceived through a "bleep bleep" in specific moments of the gameplay, followed by the sound of an airplane. These mechanics offer parachuted cargo including the best items of the game to players according to the map. This is one of the strategies Tristan Harris (2016) identifies as one of the company actions to hijack the user's mind: "In order to maximize addictiveness, all tech designers need to do is link a user action (like pulling a lever) to a variable reward. You pull a lever and immediately receive an enticing reward (a match, a prize!) or nothing. Addictiveness is maximized when the reward rate is most variable" (Harris, 2019 [2016]).

Air drop's mechanics bear risks for the player. Firstly, it is about information that is disclosed to everyone in the game and, consequently, several players will notice it. Secondly, when the player notices the air dropping, in case they wish to get the items, they must pursue it. Thirdly, they can meet other players along the way, having to fight for the reward. Furthermore, by arriving at the spot to claim the airdrop tokens, they might already have been taken by someone else and, now, it is an ambush, a vulnerable place, visible for everyone watching it. Finally, a simple "bleep bleep" can cause many variables, and the first four topics have already demonstrated the richness of this example. If the goal of the game is setting the opponents against one another, and the last one to survive is the winner, there is nothing better than creating attractions within the game to force players to meet each other and intensify the action flow of the game. For the argument we are developing, this is important because it means connecting choice to risk, an everyday practice within neoliberal economy. Everyone is free not to take risks, but those who do can achieve better rewards. The company exerts its hold over the players by offering variable rewards, which, in this case, are activated through sonorous stimuli. As a slot machine has its own sonorities, ranging from bankruptcy to wealth, which captivates bettors' attention, the temptation to check the air

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[8] This mechanic mimics army cargo delivery parachutes, when a plane drops military supplies in regions where it is not possible to land. Generally, the delivery is controlled by the artificial intelligence that can drop the cargo anywhere in the game map. Its main feature is providing valuable exclusive/rare items which cannot be found otherwise.

drop for valuable supplies also contributes to the fluidity of the gameplay. Such actions are activated in the game through sudden, persuasive sonorous notifications, hence shifting the previously planned strategy's course.

Final considerations

We have concluded that the core of what is conceptualized here as affordances politics aims at promoting the identities of games and brands, besides the interest in awakening the state of flow in players. We argue that this strategy for the suspension of time perception, that inserts the player in an immersive practice, converts gameplay time into a heightened exposition to the involved brands. Moreover, it enables companies to collect data, which connects games to the modern practices of information capital. Therefore, it is about the dynamics of labor, products, platforms, markets, perception and affectation modes, which find an important component in sonority in order to mix this complex scenery, which, by its turn, cooperates with other distinct components such as algorithms, artificial intelligences, hardware technological advances, and the improvement of graphics definition in games. Finally, these are the material features employed by affordances politics to architect strategies to be implemented into the complex financial and attention economies that unceasingly transform, adapt, and complexify, always seeking more effectiveness/profit.

As seen in the conceptualization by Nieborg and Poell (2018), the fact that games are softwares within this new informational paradigm characterized by the platformization of cultural contents, enables the constant update and remodeling of products. These are the nuances of an algorithm operated capitalism in which every data collection is invariably positive, since even negative feedback from players also enable companies to update their products, readjusting them in order to make them good for users.

Finally, these dynamics move an astonishing figure within a growingly fast paced-market, bringing about, among other effects, the hyperstimulation of minds and bodies, which increasingly will need intense excitement to have their attention captured, what sonorities and games will readily achieve, ending an affective-cognitive-commercial (almost) unfailing cycle. It is up for game, media, neuromedia dynamics, and related fields scholars, in their different dimensions, to unite in order to bridge the gap through the construction of resistance, planned clashes, and the proposition of vanishing points and other audibility able to stop the mentioned cycle. May the current paper be one more voice to echo this urgent calling.

References

Call of Duty (2003-2020). United States/Japan: Activion/Square Enix. Electronic Games.

Collins, K. (2013). Playing with Sound: A Theory of Interacting with Sound and Music in Video Games. Cambridge: MIT Press.

DeMarchi, L. (2020). Pós-streaming: um panorama da indústria fonográfica na Quarta Revolução Industrial. In: Magi, E. DeMarchi, L. (eds.). Diálogos Interdisciplinares sobre a Música Brasileira. São Paulo: UNESP/ Cultura Acadêmica Editora.

Denora, T. (2004). Music in everyday life. Massachusetts: Cambridge University Press.

F1 (2020-2020). United States/Canada: Codemasters/Electronic Arts. Electronic Games.

Falcão, T. et al (2020). #BoycottBlizzard: Capitalismo de Plataforma e a Colonização do Jogo. Contracampo, v. 39, n. 2, p. 59-78, May/August.

FIFA (1993-2022). United States/Canada: EA Sports/Electronic Arts. Electronic Games.

Fortinite (2017). Carry, US: Epic Games. Electronic Games.

Gran Turismo (1997-2017). Japan/United States: Sony Computer Entertainment. Electronic Games.

Gibson, J. J. (1986). The Ecological Approach to Visual Perception. Boston: Houghton Mifflin.

Grout, D.; Palisca, C. (2017). História da Música Ocidental. Lisboa: Gradiva.

Grand Theft Auto V (2013-2022). New York: Rockstar North/Rockstar Games/Take-Two Interactive, Electronic game.

Harris, T. (2019 [2016]). Como a tecnologia está sequestrando a sua mente. IDEC, 5th February. Retrieved June 9, 2021 from: https://idec.org.br/artigo/como-tecnologia-esta-sequestrando-sua-mente.

Leonardi, P.; Treem, J. W. (2012). Knowledge management technology as a stage for strategic self-presentation: Implications for knowledge sharing in organizations. Information and Organization, v. 22, n. 1, p. 37-59.

McLuhan, M. (2007 [1964]). Os meios de comunicação como extensões do homem. São Paulo: Cultrix.

Meneguette, L. C.; Bausbaum, S. R. (2016). Pensando a sonoridade do jogo: uma proposta de organização conceitual. Proceedings of the Brazilian Games and Digital Entertainment Symposium, School of Polytechnics / USP, 8th to 10th September, 2016.

Nieborg, D.; Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. New Media & Society, v. 20, n. 11, p. 4275-4292, 2018. NORMAN, Don. Affordance, conventions, and design. Interactions, v. 6, n. 3, p. 38–43.

Palaus, M.; Marron, E.; Sobera, R. V.; Ripoll, D. R. (2017). Neural Basis of Video Gaming: A Systematic Review. Frontiers in Human Neuroscience, 22nd May. Retrieved July 3, 2021 from: 10.3389/fnhum.2017.00248.

Pereira, V. A. (2020). Comunicação na Era Pós-Mídia: Tecnologia, Mente, Corpo e Pesquisas Neuromidiáticas. Porto Alegre: Sulina.

_____(2015). Episódios midiáticos extremos, dinâmicas contemporâneas de comunicação e pesquisas neuromidiáticas. Contracampo, v. 32, n. 2, p. 18-35, April/July.

_____(2006). Reflexões sobre as materialidades dos meios: embodiment, afetividade e sensorialidade nas dinâmicas de comunicação das novas mídias. Fronteiras, v. VIII, n. 2, p. 93-101, May/ August.

Pro Evolution Soccer (1994-2022). Tokyo: Konami, Electronic game.

PUBG (2016). Seoul: PUBG Corporation, Electronic game.

Roddy, S.; Bridges, B. (2018). Sound, Ecological Affordances and Embodied Mappings in Auditory Display. In: Filimowicz M., Tzankova V. (Eds.). New Directions in Third Wave Human-Computer Interaction: Volume 2 – Methodologies. New York: Springer International Publishing.

Schaffer, R. M. (2001). A Afinação do Mundo. São Paulo: UNESP.

Schell, J. (2008). The Art of Game Design: a book of lenses. Burlington: Morgan Kaufmann Publishers.

Siebers, T. (2015). Disability Theory. Ann Arbor: The University of Michigan Press, 2008. Sterne, Jonathan. Hearing. In: Novak, David & Sakakeeny, Matt (Orgs.). Keywords in Sound. Duhram: Duke University Press.

Thurler, L. (2019). Affordances em redes sociais e fluxos informacionais: diálogos da Ciência da Informação e a teoria das materialidades. Thesis (Doctorate in Information Science) – Universidade Federal do Rio de Janeiro.

Zuboff, S. (2021). A Era do Capitalismo de Vigilância: A luta por um futuro humano na nova fronteira de poder. Rio de Janeiro: Intrínseca.

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