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An Archaeology of Music Video Games

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ABSTRACT

This article is a contribution to the study of video games – and more specifically, of so-called "music video games" – from an archaeological perspective. In recent years, much academic attention has been paid to the archaeology of media as an area of knowledge thanks to its ability to construct alternative narratives for media that were previously rejected or forgotten, in addition to offering resistance to the rhetoric around digital and its emphasis on change and innovation. Studies on new media, including those dedicated to video games, often share a disregard for the past (Huhtamo and Parikka, 2011, p. 1), something that is also observed in specific genres such as music video games. Starting from these and other premises, the aim of this article is to understand music video games from an archaeological point of view that allows us to go beyond the rhetoric of change and novelty linked to modern digital and three-dimensional versions of this type of video game.

Introduction

The so-called archaeology of media, or "media archaeology", has been of great interest to academics for several years, especially in the Anglo-Saxon and Central European sphere and increasingly in the Spanish-speaking academic community. The term, inspired by the work of Michel Foucault, has recently been claimed by scholars such as Friedrich Kittler (1999), Siegfried Zielinski (1999), Thomas Elsaesser (2004, 2018), Erkki Huhtamo (2004, 2007), Wolfgang Ernst (2018) and Jussi Parikka (2012), whose contributions have been decisive in clarifying the theoretical bases and methodologies of this new field of research. These researchers converge on the point that an archaeological approach enables media that have been suppressed, rejected, forgotten, or considered obsolete to be revived through the construction of new narratives, also taking into account inventions that never materialized or investigations that were never legitimized but which gain new meaning when revisited. It is therefore concerned with "inventions and inventors that, without apparently having prospered, may have influenced the development of media, and whose recognition is immensely useful when it comes to delving deeper into media history, and therefore art history" (Alsina et al, 2018, p. 2). Taking an archaeological perspective during an era marked by the rhetoric of technological novelty, evolution and revolution remains a statement of principles and a way to resist digital's drive to innovate and its increasingly rapid planned obsolescence. Thus, "In the face of the strategic amnesia of digital culture and the new media industry, Media Archaeology can oppose these forces as a possibility for memory, and the scourge of oblivion", a way of seeing "the old in the new" and "the new in the old" (Alsina et al, 2018, p. 3).

This archaeological perspective or "impulse" towards media (Ernst, 2018) has been especially applied to film analysis. The term "archaeological" in fact first appeared in film studies with such early works as that by Ceram (1965). As Ernst (2018, p. 46) acknowledges, media archaeology "is fascinated with cinematography in terms of its mechanism", a fascination which has resulted in a wide variety of cinematographic archaeology studies (Zielinski, 1999; Mannoni, 2000; Huhtamo, 2004; and Elsaesser, 2004; 2018). Other audiovisual media, such as video games, have not been so fortunate. This is partly explained by their status as a "new medium", since, as Huhtamo and Parikka point out (2011, p. 1), new media studies often share a disregard for the past, because although the challenges posed by contemporary media culture are extremely complex, "the past has been considered to have little to contribute toward their untangling. The new media have been treated as an all-encompassing and 'timeless' realm that can be explained from within". Video game studies, notes Collins (2016), have often ignored the non-digital games that have influenced the history and design of video games.

A notable exception is the work of Erkki Huhtamo, one of the first researchers highlighting the importance of the archaeological approach to the study of video games. According to Huhtamo (2007), an "archaeology of gaming" is much needed, since video games did not

come out of nowhere; they have a historical background which has to be "excavated", and their condition as an interactive medium can even be traced back to the time of the industrial revolutions of the 19th and early 20th centuries. For this author, the video game, as a paradigmatic example of a "new medium", has traditionally been represented as something unprecedented, "a unique phenomenon heralding an imminent transition into a culture of interactivity" (Huhtamo, 2007, p. 59). This overlooks an entire history of public and private proto-interactive devices which, although mechanically simple (at least by 21st century standards) and limited in their interactive potential, paved the way for future applications such as electronic arcade games or the current digital interactive games. For Huhtamo, the archaeological approach allows us to see that the origin of the video game as an interactive medium cannot be attributed to a single source, but rather "emerges from a slowly evolving, complex web of manifold cultural threads and nodes" that began to develop long before the advent of so-called "digital interactive media".

However, with the exception of the works by Huhtamo and other authors such as Parikka and Suominen (2006), the truth is that video game studies have paid little attention to the past and have tended to explain the history of the medium "in a remarkably uniform fashion, built around the same landmarks, breakthroughs and founding fathers (not a word about mothers!)" (Huhtamo, 2007, p. 46). While this has been the case for video games in general, it has also occurred in the specific case of video game sound and music, as pointed out by one of the leading specialists on the subject, Canadian researcher Karen Collins. In her important article *Game Sound in the Mechanical Arcades: An Audio Archaeology*, Collins openly recognizes that historical approaches, including her own (2008), to video game sound have begun by analysing video games, ignoring the important role of their mechanical and electromechanical predecessors in the configuration of their design and functionality and in establishing aesthetic parameters (Collins, 2016).

With this kind of caution in mind, the aim of this article is to understand so-called "music video games" from an archaeological approach that allows us to go beyond their modern digital and three-dimensional versions. The work aims to locate this particular video game genre within a larger network that began to develop prior to the emergence of the most emblematic titles of the genre. This will allow us, according to archaeological logic, to discover what is, or is presented as, "new" in gaming culture by digging into the seemingly old and obsolete.

What kind of video games are music video games?

When we think of music video games, certain titles immediately come to mind: *Dance Dance Revolution* (Konami 1998), *Guitar Hero* (Harmonix Music Systems, 2005), or *Rock Band* (Harmonix Music Systems, 2007). In these games, the theme and playability are oriented to the player interacting with music through the use of peripheral devices that simulate or recreate dance tracks or real musical instruments, from electric guitars to drums. The ob-

jective of this type of video game is for players to correctly execute a song as it is played on the screen. The mechanics, therefore, are not so different from the first "shooter" or "fighting" games – the so-called "twitch" video games – which required "a high degree of concentration, hand-eye coordination and quick reflexes" (Darley, 2002, p. 51). In music video games, rather than eliminating aliens (as in the popular *Space Invaders* from 1978, the prototype shooter game of its time), quick reflexes and skill in handling the controller help the player to correctly execute the musical notes or dance steps successively displayed on the screen, which the player has to reproduce using their own body or their instrument-controller. In this sense, music video games correspond to the type of video games Jesper Juul characterizes as having a "mimetic interface"; that is, video games in which the physical activity of the player imitates the activity of the game on the screen (Juul, 2010).

These types of video games became enormously popular during the first decade of the 21st century. The commercial success of franchises such as *Guitar Hero* meant that they enjoyed a great deal of public attention for quite some time, including criticism related to the type of musical experience that this "new" type of video game was promoting. The most common concern was the fear that "fake" instruments and a superficial understanding could replace a real commitment to learning an instrument. This was a very similar criticism to those levied in the past at instruments such as the pianola or player piano, whose value as a "real" instrument was also questioned in the face of its creators' attempt to make playing an instrument more accessible to non-musicians (Roquer, 2015). However, several researchers have argued that video games such as *Guitar Hero* have done just the opposite and have cultivated a new interest in music. In a UK study conducted in 2008, for example, more than half of young people acknowledged they had played along to music video games, and a fifth claimed to have played a real instrument after this type of video game awakened their interest (Bogost, 2011). Moreover, the cumulative experience of playing the "false" instruments of this type of music video game can be very valuable when it comes to handling real instruments. As ethnomusicologist Kiri Miller (2008) points out, learning to use the controller of a console is very similar to learning to play a musical instrument, even more so if the controller emulates the instrument itself, as in this type of video game.

However, although these video games may encourage someone to play a real instrument, they are still very different from the real thing, especially in aspects such as creativity, improvisation, and originality, which are fundamental in genres such as rock. As Bogost (2011) notes, the true aesthetics and experience of these types of video games relate to musical response rather than musical creation. Songs are grouped by level of difficulty rather than genre or period, and the experience of repeatedly playing a song at increasing levels of complexity does not lead to greater mastery as a musician but to a greater understanding as a listener. Likewise, in her ethnography on *Guitar Hero* and *Rock Band* players, Kiri Miller notes some negative responses on the question of musical creativity in this type of game. One of her informants notes that "*Guitar Hero* is more a matter of pressing the right sequence

of buttons at the right time. There isn't the freedom to actually improvise anything", while another acknowledges that "there is no creation involved in playing *Guitar Hero* (yet). It is essentially the same exercise as playing *Simon Says*" (Miller, 2012, p. 115). As Miller points out, there is a fundamental mismatch between the musical-production mechanics of this type of video game and the musical aesthetic that guides them. Rock musicians do not perform from notation, and the figure of the "guitar hero" in particular is a "'representative icon of individual creative expression', whose musical-genius status relies on apparent originality and spontaneity" (Waksman, 2001, p. 124; Miller, 2012, p. 114). As another of her informants points out: "When you go see an actual musician perform... if you get the perfect musician, they are going to perform something differently every time, and it's going to be amazing every time. But if you get the perfect *Rock Band* player, it's going to be the same". According to Miller, that kind of conformist perfectionism is the antithesis of authentic rock and the very figure of the guitar hero itself, reducing this type of video game to the logic of "pressing buttons on time". In titles such as *Guitar Hero*, players (and potential musicians) would therefore be closer to orchestral players than legendary rock musicians and heroes, because, as Miller, quoting Cottrell, points out, many orchestral musicians acknowledge that "certain aspects of what they do are not, in fact, very creative, and simply require them to reproduce musical information in as straightforward a manner as possible, unfiltered...by their own interpretive ideas" (Cottrell, 2004, p. 120; cited in Miller, 2012, p. 116).

This type of argument highlights the difficulty of thinking about the genre of music video games in terms of improvisation, authenticity, originality, and creativity, since in most cases games are based on listening to sounds (*Guitar Hero*, *Rock Band*) or visualizing dance steps (*Dance Dance Revolution*) produced by others with the aim of repeating the pattern correctly, a kind of experience and playability that nevertheless did not start with these titles.

An archaeology of music video games

The different studies and reports on music video games tend to associate this genre with the commercial success of the *Dance Dance Revolution* and *Guitar Hero* franchises, which were quickly lauded as the two paradigmatic titles of the genre. In some cases, precedents are cited such as *PaRappa the Rapper* (Nana On-Sha, Sony, 1996), considered by some authors as responsible for creating an "industry within the industry" (Horowitz, 2016) since it was one of the first video games to promote the kind of interactive rhythmic experience that was normalized years later through titles such as *Guitar Hero*. This video game, released in Japan in 1996 and a year later in the United States and Europe, follows the adventures of a dog named PaRappa, who must hone his skills as a rapper in order to impress Sunny Funny, a flower-like girl with whom he is in love. The player has to press a combination of buttons following the rhythm of the music so that the sequence corresponds with the series previously displayed on the screen; a system similar to that of later music video

games. The game also stands out for its graphic appearance, an original universe of cartoons and hip-hop aesthetics rendered in technicolour in which a three-dimensional set is mixed with paper-thin two-dimensional characters that look like cut-outs when they turn. "Parappa, in fact, means 'flat' or 'paper thin' in Japanese. So the whole game looks like a trippy pop-up book brought to life" (Herz, 1998). All this highlights the multi-semiotic character of this video game, which combines the signs, processes, and aesthetics of the world of books, cartoons, rap music and hip-hop culture within one product.

However, other machines were already promoting a similar experience years before *PaRappa the Rapper* or any other interactive digital video game that can be cited as a precedent for the music video games genre. The first of these was *Touch Me*, an arcade game released by Atari in 1974. A pioneer in arcade games at that time, Atari decided to release a game based on memorizing and repeating sounds. The player had to watch a row of lights that lit up and generated sounds and then repeat the sequence in the right order. The design of Touch Me was simple and crude: it had no screen and in effect consisted of a smaller than standard arcade cabinet with four large round buttons of the same colour. The game was not popular in its day because pinball machines and video games were more appealing than pressing illuminated buttons on a box without a screen. Despite its failure, according to authors such as Bogost (2011), *Touch Me* laid the foundation for the kind of basic experience promoted by music video games: the musical response.

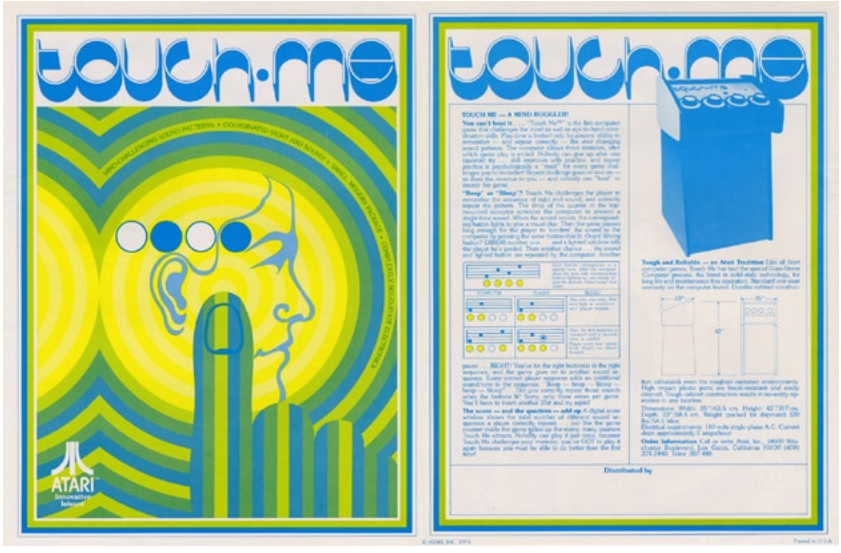

Figure 1. ***Touch Me*** **arcade promotional flyer. Image courtesy of The International Arcade Museum®**

That aside, *Touch Me* caught the attention of some developers of the time, including Ralph H. Baer, creator of the first home video game system: the *Magnavox Odyssey*. Baer came across *Touch Me* during the "Music Operators of America" convention in November 1976, where he was able to see and test the machine made by Atari. Baer liked the concept of a musical memory game but was horrified by the design and sound of the machine. Accor-

ding to him, the machine emitted "truly horrible and strident" sounds, besides being "visually boring" (cited in Knoblauch, 2016, p. 29), so he decided to use the idea of *Touch Me* with the intention of improving the game and making it more visually and musically attractive, a decision that is best understood in the context of his conflicts with Nolan Bushnell, founder of Atari. As Kent explains:

> In 1975, Magnavox filed a suit against Atari, claiming that Nolan Bushnell attended a demonstration of the Odyssey game console in Burlingame, California, and stole Ralph Baer's concept of electronic table tennis. In an ironic twist, Baer attended a 1976 trade show and stole an idea for a portable game from Bushnell. (Kent, 2001, p. 201)

Baer quickly started work on his improved version of *Touch Me* and introduced his prototype to the Milton Bradley Company, the famous American board game manufacturer. The company executives liked the prototype but suggested some changes (Knoblauch, 2016). It was decided first to change the name Baer had given it, *Feedback*, to *SIMON*, short for the popular children's game Simon Says. Second, to add more features to the game in order to increase its difficulty and thus extend the value of repetition. And third, to change the square design initially presented by Baer for a smooth saucer-shaped design consisting of four large red, blue, green and yellow buttons. In this way, Atari's *Touch Me* was the inspiration for the creation of *SIMON*, a game that following its launch in 1978 achieved a level of success and popularity the Atari machine never had. Baer (with the help of Milton Bradley) thus achieved his goal of improving the concept of the "musical memory game", not only making *SIMON* more visually and musically appealing than *Touch Me*, but also incorporating a system of levels of difficulty that soon became one of the defining characteristics of the game and one of the reasons for its popularity. Despite the success of *SIMON*, Atari did not sue Baer or Milton Bradley for copying their idea, which Baer himself explains as follows: "First of all, I don't think he [Bushnell] had a patent. Second, I think the scheme he had implemented was an old scheme-following a sequential light. *Simon*'s claim to fame was the association of discrete sounds with each light" (quoted in Kent, 2001, p. 202).

SIMON's success led to the appearance of several games that mimicked the model, including a portable version of Atari's *Touch Me* (1978), whose design and sound were remarkably similar to *SIMON*. This portable device copied the coloured buttons on *SIMON*, produced harmonizing sounds, and had the same game variations and difficulty levels as the machine developed by Baer. Its only difference to *SIMON* was its size, which was similar to a pocket calculator, and the inclusion of a small LED screen showing the scores. *Follow Me* is another example of a game based on *SIMON*. It was launched by Sears in 1979 and promised to offer a similar experience to *SIMON* at half the price. Also in 1979, Tiger Electronics released its own version of *SIMON*, aptly named *Copycat* as that is basically what

it was: a copy of Baer and Milton Bradley's original *SIMON*, the only difference being the octagonal disc design.

To keep up with these and other imitations (such as the Einstein games by Castle Toy and *Maniac* by Ideal Toy Company, also released in 1979), Milton Bradley decided to develop and launch different versions of his game by updating the electronics of the device, incorporating more and better visual and sound effects, and adding more buttons and colours beyond the original four. For example, *Super SIMON*, the first of these updates, offered a multiplayer version of the original game by doubling the number of buttons, which translated into more hours and forms of gameplay, as stated by the slogan on the box: "5 different games with more than 20 ways to play". Since then, Baer's game has undergone different modifications and variations but has always remained true to its original concept of being a game based on memory and musical repetition.

Conclusions

This article has tried to apply an archaeological perspective to the study of so-called music video games, a particular type of video game in which the theme and gameplay are geared towards the player's interaction with the music. While this kind of game is usually associated with the commercial and popular success of franchises such as *Dance Dance Revolution* and *Guitar Hero*, an archaeological approach allows us to transcend the rhetoric of change and novelty that accompanied their launch to locate this genre of video games in a larger network that began to develop long before these and other titles appeared between the end of the 20th and the beginning of the 21st century. The enthusiastic, revolutionary and futuristic rhetoric that often accompanies video game discourse (and especially that dedicated to the launch of new titles or devices), creates the impression that "the past functions solely as something worse or less sophisticated, something that has to be left behind and practically forgotten" (Parikka and Suominen, 2006).

The novelty of modern music video games in terms of design, mechanics and playability can be found in older machines going back to Atari's *Touch Me* or Milton Bradley's *SIMON*, two games that laid the foundations for the type of experience that defines this particular genre of video games: musical response based on memorization and repetition of sounds. This is an experience fundamentally based in so-called "retentive listening" (Huron, 2002; Collins, 2013), which occurs when we try to remember what we hear, usually for the purpose of repeating it. Collins illustrates this type of listening using the example of *SIMON*. The essence of this game is to get players to remember simple sequences of tones in order to repeat them, so they listen with the intention of retaining the tone pattern (Collins, 2013, p. 6).

The archaeological approach applied to the study of music video games allows us to observe that, with a greater or lesser number of variations, the numerous musical titles released in recent years have only reproduced the model introduced decades ago by machi-

nes such as *Touch Me* or *SIMON*. While it is true that the images and sounds of modern music video games are more sophisticated and advanced than those from the 1970s, they are still based on the design, playability and difficulty conventions established by their forerunners. This is especially true of features originating in *SIMON*, various elements of which have been borrowed by modern music video games, such as the large buttons of different colours and the increasing levels of difficulty (Knoblauch 2016). As Miller points out (2017, pp. 7-8), *SIMON* managed to bring together interface-specific motor skills, audiovisual engagement, challenges of memory and attention span – characteristics found in most video games. However, *SIMON*'s emphasis on listening, repeating, and linking button presses to audio outputs make it a distinctly musical game and the model on which most subsequent music video games have been based. The designers of these games have continuously integrated more styles of contemporary popular dance and music to their games, helping to make them more conceptually accessible and more affectively complex.

But let us not forget that the origin of *SIMON* is in *Touch Me*, a forgotten and rejected machine that turned out to be a complete commercial failure and was even mocked by Baer, who had no qualms about copying it to create his own musical memory game. Yet within the failure of *Touch Me* and the limitations of its sound, visuals and interactivity can be found the first cultural threads and nodes that began to weave the complex network of music video games long before the genre even existed.

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